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Textile Education: A Timely Subject with a Glorious Past, but a Far Greater Future

A Resume and a Forecast of One of the Industry's Most Important Crops

By Douglas G. Woolf

It is harvest time once more.

Just now, one of the industry's most important crops—the graduate body of the textile schools—is being reaped.

Numerically, this crop is rather insignificant. With due apologies for his weakness in mathematics, the writer of the accompanying article estimates roughly that the 1927 textile school graduates represent not more than five one-hundredths of one per cent. of the total number employed in the industry.

Like all crop figures, this is subject to revision.

Potentially, this crop's value is beyond estimation. Fortunately, the importance increases in a progressive ratio.

The writer has tried to point out a few of the noticeable trends in textile education, as related to commercial production. Just as is true in most things he writes, he claims in this case no priority of thought. But repetition is at least as important as innovation, and certainly it behooves each manufacturer to give a few minutes of thought, once a year, to the men who are being trained for potential jobs in his plant.

WE have always understood that formal textile education in this country dates back to 1884, when the Philadelphia Textile School was started. However we think it safe to state that the bulk of such education has been concentrated within the last quarter-century.

Twenty five years is not a long period in the life of an industry whose antiquity is at once its proudest boast and its greatest handicap. Consequently it is all the more remarkable, in the writer's opinion, that textile school training has exerted so much influence in such a relatively few years.

Each industry, in the minds of its leaders, is unique. It has problems of its own which make every other industry a simple one by comparison. Much of this thought must be discounted as an idle excuse for existing weakness. But, in the case of textiles, it is not foolish to state that probably no other industry has offered greater resistance to technical training.

This statement requires little expansion. Processes of manufacture, developed largely by empirical methods, are not readily entrusted to the hands of theorists. An incalculable amount of thought and initiative and energy has gone into the making of our industry as it stands today. The fabrics of 1927 are the products of centuries of intelligent and patient striving.

Such a field is not a fertile one for scientific endeavor. It can only be fertilized by persistent propaganda.

An Acknowledgment

In order that he may be understood correctly at the start, the writer wishes to state that he is not one of those who minimize the importance of so-called practical men. It is true that he was guilty of this mistake when he first walked into a textile mill as a very green and very fresh college man. He had a typically academic scorn for the "little red book" in the pocket of the boss starcher and for the "experience" which enabled each foreman to "get out production."

Fortunately, he convalesced from this illness—or else he would be selling bonds today instead of writing for a textile publication.

Nevertheless—

In fact, he has recovered so completely that, if he were unfortunate enough to be a textile manufacturer today, he would place his departments in the hands of men who had actually proved their ability to do the work required by the various processes.

Nevertheless—and notwithstanding—he is firmly convinced that eventually all the key-men in the average textile mill will be technically trained—and that those plants which resist this tendency will be forced out of the running.

These statements are not incompatible. Given two applicants (of equal native ability and intelligence) for the position of overseer, superintendent or what-not, the one who has "produced the goods" in the past quite rightly gets the job. But if these two men have an equal amount of successful experience—and one has the advantage of a technical training, the latter is the logical candidate.

Consequently, the problem resolves itself into the question of how theoretical training and practical experience can be combined most readily and most efficiently.

Influences which inhibit such a combination are many and varied. Here are a few of them:

1. The natural doubt entertained by a mill manager as to the ability of a theorist.

2. The more than natural jealousy entertained by a practical overseer toward a trained subordinate.

3. The inclination of a school or college graduate to feel that he can do any job better than anyone else—irrespective of experience or background.

4. The ever-present problem of "handling help" which thus far has not been reduced to a scientific formula.

It is apparent that most of these problems are psychological in nature. Their solution demands a recognition of the human equation.

Fortunately, experience is proving that they are not insurmountable. Much progress has been made in the last 25 years—and infinitely more will be made in the next quarter-century.

Placing Responsibility

On the principle that no problem can be worked out satisfactorily until responsibility for its solution is properly allocated, the writer has given considerable thought to the proportionate delegation of responsibility.

He is convinced that the burden falls upon the textile schools themselves. A mill executive's job is to operate his plant so that it may make a profit for the stockholders. In carrying out that assignment, he must man his departments with individuals who can get out the work. He may have a sincere abstract interest in textile education; he may be convinced that technically trained men are the best prospects for jobs—but in the final analysis he will give a berth to the man best qualified to produce roving or yarn or cloth—or whatever the position demands.

Consequently, it is up to the deans of the textile schools to turn out men who will qualify for this fundamental requirement.

Fortunately, in the writer's opinion, the schools are manned with just this type of executives. If they were not, textile education would not have progressed as it has. But the future demands even greater effort.

Probably the most important equipment which the faculty must impart to its undergraduate body is a proper state of mind. If a boy leaves a textile school with the impression that he is equipped to manage a department of a textile mill, he is riding for a fall. The writer, with all his admitted faith in technical training, would never entrust the supervision of any department to a school graduate—even if the latter were the honor man of his class.

We believe that textile school principals fully recognize this fact. Before writing this article, we talked with educators. One dean, for example, told us that he constantly drilled into the minds of his students the necessity of serving an apprenticeship—even if a poorly paid one—before aspiring to executive honors.

The Mill Man's Responsibility

But the burden is not entirely on the shoulders of the textile school directors. The mill man has a very real responsibility.

We talked with textile executives also and we were struck with the varying attitudes entertained. Some were "from Missouri"—waiting to be

shown; others were anxious to play their part.

Without any claim of originality, the writer wishes to point out the following ways in which textile mills may contribute to the development of properly trained personnel:

1. Employ, as operatives, textile school undergraduates during the summers between seasons.

2. Select promising men from their pay-roll and finance their textile education.

3. Employ textile school graduates as assistants to the practical men who direct their various departments—and pay them adequately.

4. Take a personal interest in the schools; visit them; talk to the students; cultivate the faculty.

All of these things have been done in a desultory fashion. We know textile executives who have done more than their share in cooperating with the schools.

There are many cases of "subsidized" education. Scholarships have been offered. Associations and individual corporations offer medals and prizes for excellence in scholarship. Machinery firms donate equipment to the various schools.

But there is still much to be done. Each of the above suggestions, it is true, offers complications. Men taken on during the summers are more trouble than good. Sending promising young men to school disrupts an organization. Employing trained assistants opens the way for personal jealousy and suspicions.

But, here too, the problem is a psychological one—and its solution demands patience. It also demands faith in the theory of scientific training.

Certainly, the combination of practical experience and theory is the answer. To be personal again, the writer recalls the first day of his experience as a textile mill chemist. The "super" tossed him a bottle of soluble oil and asked him to submit a report on it by noon. The writer had never heard of soluble oil. If he had had some practicable experience during his college course, he would have learned just *what* he wanted to get out of his education—and would have gotten it.

We did not intend to quote anyone in this article but we cannot refrain from repeating what George S. Harris, newly elected president of the American Cotton Manufacturers Association said to us going down on the train to the Atlantic City convention a few weeks ago. "The best thing that ever happened to me," said Mr. Harris, "was the practical mill experience I had *before* and *during* my textile school course."

Providing such practical experience may involve hardship upon the mills involved. But the return will be far greater than the outlay.

The Practical Man's Side

Returning again to the practical man, the writer does not believe that he, as a class, is antagonistic to the trained man. There are, of course, certain short sighted and possibly dyspeptic overseers who visualize school graduates as nothing but underhanded competitors for their own jobs. But there are far more who are glad to receive the benefit of trained assistance and to employ that benefit as a means of increasing their usefulness.

We recall a conversation we had recently with the production manager of one of the largest mills of the South. Trained only in the school of experience; confirmed in his belief that hard knocks make a better teacher than calculus; impatient of any method of procedure other than his own initiative; naturally unwilling to take the time to instruct a man in the things which he had learned by years of work—nevertheless that man admitted to the writer that technically trained men would eventually fill *all* the responsible positions in the textile mills.

The man who knows how to produce or finish yarn or cloth need not fear for his job. He will always be in demand.

But, the man who can produce scientifically will gradually replace the man who produces empirically.

The day when this will be universally true is inevitable. It can be hurried. Mill executives can contribute to its realization by offering even more thought and cooperation than they have in the past. Textile school directors can help by more intensive emphasis upon industrial relations. It is true, as indicated previously in this article, that this phase of mill management has not as yet been reduced to a scientific basis. But the writer firmly believes that it *will* become a science—a science devoid of the bunk that has been injected into it in the past, but a science which will be as capable of accurate formulae as is chemistry or physics or mathematics.

We believe that this whole subject of cooperation with textile schools deserves the serious consideration of every branch of the industry. We believe that committees should be appointed—composed not of men who are seeking honorary posts but of men who are anxious to contribute, out of their experience, to the scientification (if there is such a word) of a traditionally unscientific industry.

We know that the textile schools have been of inestimable value in the last twenty-five years. We know that they have developed a group of big men who can talk in a practical language.

We realize, however, that the future demands much more. We are living in an age of change. New fibers, new processes require a mental flexibility undreamed of in the past. The schools can supply this—must supply it, in fact. But they need the aid of every man identified with the industry.

Finally, we wish to repeat our conviction that the next quarter century in textile education will witness developments far in advance of anything effected by the admittedly remarkable progress of the last twenty-five years.

Textile School Survey

Small Percentage of Northern Graduates Are in the South

BOSTON, June 2.

NEW ENGLAND textile school graduates can be found in the textile manufacturing countries throughout the world, but the great majority of them are active in the industry at home, according to a survey made by the National Association of Cotton Manufacturers. The South with its more recent textile development, which has attracted spindles and capital from this section, apparently has induced few of the trained young men to leave the northern States.

Eight hundred and thirty-one of the students graduated from the three New England textile schools in the last several years are now engaged in business in this section and but 83 have gone to the southern States. The Philadelphia Textile School has 876 in the North and 91 in the South.

New England mills, through the National Association of Cotton Manufacturers, have cooperated with the textile schools and afforded every assistance in training and encouraging the young men preparing to enter the industry. Some of the manufacturers have positions ready for a number of the graduates each year, taking a certain number of each class as the young men complete their studies.

Research work which is being utilized more and more, particularly in the large cotton manufacturing plants, to bring greater efficiency and lower production costs is given over to these graduates who have been trained for such activities. One of the mills, seeking a man who would have the qualifications which its executives believe will save the plant money, has paid the expenses of a student through textile and collegiate courses, to give him the opportunity to prepare himself to meet their requirements.

The National Association Medals

To encourage the students the National Association of Cotton Manufacturers each year awards a medal to the leaders of the graduating classes in all of the eligible textile schools of the country. This is one of the highest honors available to young men preparing to enter the textile industry and is given in recognition of excellence in scholarship. The medals this year will be awarded at the Philadelphia Textile School, Lowell Textile School, New Bedford Textile School, Clemson Agricultural College, and North Carolina State College of Agriculture and Engineering. One of the medals has already been awarded to James L. Young, Jr., of the Georgia School of Technology, Atlanta, Ga.

Distribution of Graduates

Graduates of the four textile schools in the northern part of this country are to be found in foreign countries including: China, India, Egypt, Colombia, Argentine, Brazil, and Ecuador, South America; Mexico, Switzerland and France. More than 1,900 of the graduates of the New Bedford Textile School and the Philadelphia Textile School, are now in the New England States, New York, New Jersey, and Pennsylvania. Only 175 of the graduates are in the Southern States.

Figures from each of the schools are: New Bedford Textile — Massachusetts, 211; Rhode Island, 42; New York, 41; Connecticut, 8; New Hampshire, 4; Maine, 1; Vermont, 1; New Jersey, 8; Pennsylvania, 7; Southern States, 40.

Bradford-Durfee: Massachusetts, 186; New Hampshire, 2; Connecticut, 6; Rhode Island, 28; Vermont, 1; New York, 27; New Jersey, 12; Pennsylvania, 2; Southern States, 7.

Lowell Textile: Massachusetts, 246; Rhode Island, 22; New Hampshire, 23; Connecticut, 13; Maine, 10; Vermont, 7; New York, 75; New Jersey, 25; Pennsylvania, 16; Southern States, 26.

Philadelphia Textile: Pennsylvania, 421; New York, 204; New Jersey, 73; New England States, 178 and Southern States, 91.

N. C. State College Summer School

RALEIGH, N. C.—The summer session of North Carolina State College will open June 12 and continue for six weeks.

The Textile School will offer intensive courses in Mill Calculations, Carding, Spinning, Weaving, Designing, Fabric Analysis and Dyeing. These courses will be taught by the regular members of the textile school faculty and have been so arranged that a mill man may attend two, four or six weeks and devote his entire time to any particular branch or branches of the industry in which he is especially interested. This will be an excellent opportunity for mill men and teachers of night classes for mill operatives to supplement their practical training with a theoretical knowledge of the industry.

The course in Cotton Classing, offered by the Department of Agronomy, deals principally with practice in grading and stapling cotton. Each man is expected to grade and staple 75 to 100 samples during the class period each day. The course is accompanied by short lectures, demonstrations, and pictures. The universal cotton grades will be used as the basis of the course and practice samples will cover the entire number of Government grades. The United States staple types for length are used as standard lengths and much time will be devoted to stapling.

Philadelphia Textile School Holds the Graduation Exercises for the Class of 1927

Exhibit of Students' Work—Rayon Stressed— Alumni Program — Diplomas and Prizes

PHILADELPHIA.

THE first week in June is marked with red upon the calendar, not only by the textile industry in this vicinity but by graduates scattered throughout the United States and many foreign countries. For the class of 1927 of the Philadelphia Textile School this week marked a distinct change, terminating as it did their study period and bringing them face to face with their life's work.

To hundreds of graduates in all corners of the globe this week brings back recollections of a similar event two years ago, five years ago or to others more than a quarter of a century ago. For these reasons Thursday and Friday were important days, exercises in connection with the graduation of the 1927 class of this venerated institution being held, followed by the annual meeting and "Cruise" of the Alumni Association of the school.

A reception to the class of 1927 was held Thursday evening, June 2, in connection with the opening of the exhibition of students' work, which for the Philadelphia school takes the place of formal graduation exercises of other institutions of a similar character. The display on the first floor of the school building will remain open to the public from June 3 to 18. This year's exhibit of the products made by students of the Philadelphia Textile School is beyond doubt the most comprehensive in their history, emphasizing more than before rayon and other combinations of fibers in the various materials shown.

The exhibition is attractively arranged in rooms of the school and includes brocades, blankets, necktie fabrics, cloakings, upholstery goods, rayon draperies, cotton and rayon dress goods, silk wall hangings and a complete line of worsted and woolen men's wear fabrics. All of the work shown was designed, manufactured and finished by students, reflecting credit upon the systematic training given in this institution.

New Color Combinations

Work on display is divided into three groups: elementary, intermediate and advanced. First year of elementary work embraces such fabrics as constitute the fundamentals, in fabric structure such as color effects, trouserings, dress goods made on hand looms of cotton, wool or silk. All of the fabrics shown represented a high standard of workmanship both as to structure and color, the latter being especially in excellent taste. Light cotton fabrics as well as cotton and rayon mixtures attracted attention because of the color harmony attained by students in this line of their work.

Intermediate and advanced work is represented in the exhibit by a complete line of dress goods, suitings, ginghams, waistings, piques, men's fancy trouserings, vestings of cotton and wool, madras shirtings, cheviots and woolen cassimeres. The silk, satin, rayons and upholstery goods displayed were undoubtedly far in advance of any previously shown both in respect to workmanship and color schemes. All color combinations were selected by the students from the 1927 spring color card. Besides rayon, spun silk and tram were prominently used in the upholstery fabrics, the designs comparing favorably with any presented by the most artistic shops of the country.

Jacquard Lines Stressed

One of the most interesting parts of the display is the jacquard work, the Philadelphia school being a leader in this line. More than 225 pieces of jacquard fabrics were shown including fine figured silks, brocades, tapestries and other varieties of hangings, from damasks to elaborate brocades.

Aside from receiving their diplomas at this time of the year the graduates look forward to this week with anticipation, becoming eligible after the formal presentation to membership in the Alumni Association of the school, the two day program of this organization being as usual one of the most enjoyable features of graduation week. This year's meeting of the Alumni Association was the twenty-sixth, having celebrated their quarter of a century birthday last year. Many new features that had been added by the various committees to those that have become a custom through this long period made this year's program one of the most enjoyable ever held.

Business meeting was the first event of the two day Alumni Association program, it being preceded by a luncheon in the school cafeteria attended by most of this year's graduates as well as by a large representation of old "grads." Papers presented by members this year were of a high degree of excellence and upon subjects that are especially timely and in all instances were prepared by authorities in their particular field. The papers presented were: "Machine Made Laces," by Robert P.

Marenzanna (1918); "Twenty-five Years of Electricity in Textiles," by Frank C. Smith (1920), and "Dyeing of Silk Piece Goods," by William R. Gutekunst (1927). These papers will be published in a later issue of TEXTILE WORLD.

"Cruise" a Success

Annual "Cruise" of the Alumni Association probably makes the widest appeal, being looked forward to by the oldest graduates and by the class graduating, giving them their first opportunity of meeting upon common ground. It is one of the outstanding events on the two day program. An innovation this year was the time run in automobiles from the school to the Manufacturers' Country Club, located 16 miles north of the city at Oreland, Pa. An attractive prize was awarded to the car making this run in the time closest to that previously selected by the committee. Members found the ride from the city to the club one of the most enjoyable features, taking many of them for the first time through one of the most beautiful sections in this vicinity.

Second annual Association Handicap Golf Championship tournament attracted a larger number of players than usual. The winner's name is engraved upon a beautiful silver cup each year, the cup remaining in the trophy room of the school. While this feature is growing in importance the classic of the outing, the baseball game between married and single men continued its hold upon the members, there being several new prizes offered this year, one going to the tallest player, another to the shortest, one for the longest hit and a prize was given the player who came the longest distance to attend the outing. Results of this complete day of sport are being carefully tabulated and "Doc" France, the perennial scorekeeper, announced that official results would be ready for publication in the next issue of this publication.

Reynolds Speaks on Tariff

James B. Reynolds, former Assistant Treasurer of the United States, a former member of the Tariff Commission and chairman of the Republican National Committee, who was also a member of the committee that nominated President Coolidge, made the address at the banquet, Friday evening at the Manufacturers' Club, Broad and Walnut Streets. His subject was the "Tariff Tomorrow." This address was enthusiastically received by his hearers, not only as an authoritative discourse on the subject by one well qualified to speak but as an extremely timely one, a matter that many in the industry believe will assume even more prominence during the next two years. The address was in part as follows:

"The Tariff To-morrow is a day filled with difficulties for the American manufacturer. To some industries the Tariff Today is wholly unsatisfactory, even under the provisions of a law that was intended to give real protection to the American producer. But the future is far darker for all concerned. If a tariff bill was to be written by the Congress that is now in existence, it would be a measure that would not be a protective measure. The new law would be one that would reduce American production, and a 10% reduction in production in this country represents the difference between prosperity and depression.

"We pass a tariff law that gives to us the greatest prosperity ever known in the whole history of the world, and then we forget what brought about such blessing and permit the tariff tinkerer to gather a following and to threaten the era of good times.

"An important factor in the tomorrow of the tariff is that a majority of the present Congress had no part in the framing of the existing law. Of the 96 members of the Senate who in 1922 voted on the Fordney-McCumber tariff bill, 49 are not members of that body today. Of the 435 members of the House of Representatives who voted on that measure, 220 are today no longer members of the House. There is accordingly a new jury to pass on the tariff question, one that has not been tested, one that has had no experience in tariff legislation.

"It must not be forgotten that the new Senate is not a Republican body. Whether or not the Republicans organize that body and so appear to have control, that control is merely on paper. There are at least nine Senators, elected under the Republican banner, who call themselves Progressives and who claim the right to absolute independent action with no regard to party platform or policy. They cannot be depended upon to cling to the cardinal principle of the Republican party, the protective tariff. The majority of the Senate, too, is a body that is not personally interested in a manufacturer's tariff so far as their constituents are concerned. There are 25 States that are either Democratic or devoted to the interests of the Farm Bloc. These States pay just 14% of the total income taxes collected by Uncle Sam. Yet they have 50 out of the 96 votes in the Senate, and they have 173 votes in the House of Representatives.

"One of the great dangers is this combination of Democrats and Farm Bloc. The Democratic party is for reducing the tariff. However much some of its members may believe in protection, the party itself is absolutely committed the other way. Every Democrat in either branch of Congress must be regarded as an enemy of proper tariff rates for the manufacturer.

"Today the farmer is lined up against the manufacturer on the tariff. The fact that he has high tariff protection himself does not lessen this hostility. In combination with the Democrat he can accomplish much at Washington. It is a combination that menaces future tariff legislation.

"Then there is the international banker. Do not underestimate for a moment the power and danger of this element in the case. He is vitally interested in the well-being of foreign nations. Their prosperity mean large profits for himself. He is subtle in his methods and far-reaching in his influence. From him comes the cry that we should help our neighbors abroad to get on their feet, and the one way in which this can be done is to buy their goods. He is, therefore, in favor of lowering customs duties so that the foreign-made article can better reach the United States. He forgets that every importation displaces by just so much the American article in the American market. He overlooks the fact that the American banker is better off with general prosperity in America, and that history has proven that there cannot be such prosperity without a genuine protective tariff. He is working merely for his own profit. He is working hard and ably. His financial network spreads far and wide. His influence is strong, his activity is constant. He is a large factor in the dark-clouded tariff tomorrow.

"Labor is still largely on the wrong side of the tariff question. It is still a follower of the old propaganda that protective rates make high prices. It is still addicted to the old fallacy that the interests of the employe and the employer run along different lines, as if the employe could prosper if the employer does not. It has not yet learned the lesson that it makes no difference how low prices may be if a man is out of employment and has no money with which to buy. It forgets that the pay envelope of the American people is becoming thicker and thicker, that the conditions of the average person has been improving, from an economic standpoint, at the rate of 7% a year for the last five years. It should read and ponder figures issued by the International Labor Bureau of the League of Nations, surely a body not addicted to favoritism to the United States. These figures take the purchasing power of American wages at 100, and shows the wages in Canada are 80, England 55, Sweden 49, Germany 34, Austria 27 and Belgium 26. And Japan is, of course, lower yet. Is this the competition American labor wishes to meet without the protection of a tariff? How long would labor be employed without a tariff barrier?"

Chairman Congratulated

Bradley C. Algeo, president of the Alumni Association, acted as chairman of the Committee on Arrangements for the entire two-day program and was complimented by all upon completion of one of the most successful programs held by this organization. He was ably assisted by the following committee members: Cruise: Wm. J. Wall, Henry Legge, Harry Lonsdale, Harry C. Aberle, and C. W. Neild, Jr.; Trophies: Henry Legge and Harry Lonsdale; Banquet: Willis Fleisher, Wm. J. Maurer, Chas. E. Firth; Menu: Wm. C. Robb, Jos. E. Chappatte and B. Kendall Archer; Resolutions: Wm. C. Robb and Harry Lonsdale; Nominations: Wm. C. Robb and John Lockwood.

New England Tour

The graduating class will start on their 14th annual tour of New England mills on Sunday, June 5, the party being in charge of E. W. France, director, and R. S. Cox of the faculty. The party will leave New York by steamer for Fall River, where on June 6 they will visit the Stevens Manufacturing Co. and the American Printing Co. That afternoon they will leave Fall River, going direct to Providence where they will stay at the Providence-Biltmore Hotel.

On Tuesday morning the plant of the American Textile Co. will be visited, the party staying that night at Providence-Biltmore Hotel. On Wednesday morning they will be taken through the Esmond Mills. That afternoon they will leave for Boston where the party will be

quartered at the Hotel Lenox. On Thursday morning they go to Lawrence where the Wood Worsted Mill of the American Woolen Co. will be seen. At this point the class will examine the Pacific Mills. They then return to their hotel in Boston, leaving in the afternoon for Worcester, where the students will make their headquarters at the Hotel Bancroft.

On Friday morning they will have an opportunity of seeing the Crompton & Knowles Loom Works plant in that city. Later the large plant of M. J. Whittall carpet mills will be visited. That evening will be spent at the Hotel Bancroft. On Saturday they will inspect the Worcester Woolen Mills, which is the last mill on the schedule. They leave Worcester for New York city, arriving there in the evening, bringing the tour to an end.

Members of Party on Tour

Members of the party on the tour were the following: G. E. Houghton, Westtown, Pa.; W. E. Broadhead, Jamestown, N. Y.; K. C. Smith, Wyncote, Pa.; C. F. Nassau, Jr., Philadelphia, Pa.; N. F. Wright, Woonsocket, R. I.; P. E. Higgins, Worcester, Mass.; R. C. Bokum, Jenkintown, Pa.; W. H. Smith, Philadelphia, Pa.; E. S. Rosenau, Jenkintown, Pa.; F. S. Richardson, East Orange, N. J.; E. Wilkinson, 3d, Philadelphia, Pa.; G. D. Mackay, Montclair, N. J.; W. R. Gutekunst, Philadelphia, Pa.; R. H. Brehm, Philadelphia, Pa.; A. Luban, Brooklyn, N. Y.; S. Phillips, Arverne, N. Y.; F. J. Kaeding, Chicago, Ill.; G. Schneideman, Stroudsburg, Pa.; E. W. France, Director Philadelphia Textile School, and R. S. Cox, Philadelphia Textile School Faculty, Manager of Tour.

Diplomas Awarded

Diplomas awarded in the Textile Department follow:

Regular Textile Course—Robert Clayton Bokum, Wesley Ernest Broadhead, James Gordon Camelford, John Maurice Clair, James Barker Coykendall, Jr., Jesse Daniels, Stanley Milton Folkman, William James Hall, Jr., Paul Elon Higgins, William Henry Joseph Horn, 3d., George Ellwood Houghton, Harry Kirsner, Frederick William Langjahr, Abe Morton Laban, Charles Francis Nassau, Jr., Sidney Phillips, James Garfield Ramsey, Jr., Francis Stillman Richardson, Edgar Simon Rosenau, Paul Rumore, George Frederick Ernest Scheidemann, Kenneth Chubb Smith, William Henry Smith, Morris Speizman, Wilson Krebs Thomas, Carl Alfred Tips, Edwin Wilkinson, 3d, and Nelson Theodore Wright.

Chemistry, Dyeing and Printing Course—Harry Brawer, Richard Heist Brehm, 2d, Harlan Edward Glidden, William Rudolph Gutekunst, James Barrett Jones, Arthur Joseph Kollner, Theodore Edward Nestler and Victor Joseph Voss.

Certificates Awarded

FULL COURSE CERTIFICATES (Day Classes)

Cotton Course (Two years)—Frank Smith Clark, Malcolm Duce McMeekan and Coleman Wortham, Jr.

Silk Course (Two years)—Alexander Leonard Epting, Frederick John Kaeding, George Donald Mackay, Frederick Rees Stewart and Harold Morritz Veit.

Wool and Worsted Course (Two Years)—Paul Lewis Dunham, Bertram Stuart Jewell, Jr., Palmer Jenkins McCloskey, Herbert Hyman Miller, Charles Radcliffe Shaw, Jr. and Ralph Lewis Taylor.

Dyeing and Color Matching Course (Two years)—Arthur Nelson Patterson.

FULL COURSE CERTIFICATES (Evening Classes)

Regular Textile Course (Three Years)—Morton B. Abelson, Richard Alfred Berry, John F. Butler, Frank J. Rumpf, Frederick W. O. Schulz, Daniel J. Taylor and Edwin C. Taylor.

Chemistry Course (Three Years)—Frederick W. Allendorf, Jr., William Dunn, William B. Griffin, William Harry Kile, Edward Lipsius, Jr., Thomas Jefferson Newlin, Emil Richard Tetzner and John L. Volk.

Chemistry and Dyeing Course. (Three Years)—Alexander C. Banks, Isaac Percival Davis, Thomas Joseph Greene, Thomas J. Hall, Aloysius F. Hillanbrand, Carl Henry Huebler, Cyril Iles, Henry Kline, Oliver R. Krasley, Jr., William MacGregor and Albert William Neff.

Partial Course Certificates (Evening Classes)

Weave Formation (Three Years)—Earl Barbour, Thomas W. Bradley, William S. Dean, John J. Enoch, Francis S. Garchinsky, Elles M. Graves, J. Henry Kay, Earl Abraham Killian, Constant Lynch, James W. Mills, Jr., John X. Ruppert and David F. Van Horn.

Fabric Analysis and Calculations (Three Years)—Earl Barbour, Philip M. Dubile, John J. Enoch, Francis S. Garchinsky, Elles M. Graves, J. Henry Kay, Constant Lynch, James W. Mills, Jr., John X. Ruppert and David F. Van Horn.

Figured Design (Two years)—Oscar Adolf Albrecht, William S. Dean and Albert L. Woodington.

Cotton Yarn Manufacture (Two years)—LeRoy D. Cressy and James Marshall.

Worsted Yarn Manufacture (One Year)—Napoleon W. Dumouchelle, Philip Bernard Epstein, William J. Haire, Leland Webb Hovey, Andrew Worrall Keegan, Frederick William Liener, Alexander Leslie Mitchell, Jr., Ernest Thomas Peters, Carl Theodore Roth, Morris Werner Satinsky and Burton John Wagner.

Raw Materials of the Wool Industry (One Year)—Walter Dalton, Jr., Philip Bernard Epstein, Henry Riley Gummey, 3d, Leland Webb Hovey, Alexander Leslie Mitchell, Jr., Ernest Thomas Peters, Carl Theodore Roth, Morris Werner Satinsky and Burton John Wagner.

Prizes Awarded

The prizes awarded in the Textile Department of the Philadelphia Textile School follow:

Associate Committee of Women's Prize

To be awarded to the student of the regular third year day class, attaining the highest rating for the year as regards progress and proficiency in the Department of Power Weaving.

George Ellwood Houghton.

Honorable Mention: Wesley Ernest Broadhead.

Miss Clyde Prize

To be awarded to the student of the regular second year day class, attaining the highest rating for the year as regards progress and proficiency in the Department of Power Weaving.

Herbert Charles Whitehouse.

Honorable Mention: Robert Miner Cushman.

Mrs. Henry S. Grove Prize

To be awarded to the student of the second year of the regular day course attaining the highest rating for the year's work.

Herbert Charles Whitehouse.

Honorable Mention: James Albert Bostwick.

Mrs. Thomas Roberts Prize

For highest rating in the regular course, first year.

William John Bragg.

Honorable Mention: Norman Duberstein.

Mrs. Jones Wister Prize

To be awarded to a member of the second year day silk class producing the best designed and woven Jacquard Silk Fabric.

Frederick Rees Stewart.

Honorable Mention: George Donald Mackay.

PRIZES OFFERED THROUGH REQUESTS

John G. Carruth Prize

For highest rating in the wool course, second year.

Palmer Jenkins McCloskey.

Honorable Mention: Bertram Stewart Jewell.

Henry Friedberger Memorial Prize

To student ranking second in general excellence, regular course, third year.

George Ellwood Houghton.

Anna E. Sunott Prize

For student of second year chemistry, Dyeing and printing class attaining the highest rating for the full two-year course.

Carroll S. Dick.

Sarah Tyler Wister Prize

To be awarded to the student of the third year regular day course producing the best executed work in Jacquard Design.

George Ellwood Houghton, Wesley Ernest Broadhead.

Honorable Mention: Robert Clayton Bokum, William Henry Smith.

Sarah Tyler Wister Prize

To be awarded to the regular second year day student producing the best executed fabric from Jacquard Design.

Robert Miner Cushman.

Honorable Mention: Herbert C. Whitehouse, Harold Sunshine.

SPECIAL INDIVIDUAL AWARDS OFFERED

Delta Phi Psi Fraternity Prize

For general excellence in weave formation and fabric analysis, first year classes.

John Prugh Koester.

Honorable Mention: Samuel Ross Shirer.

Delta Kappa Phi Fraternity Prize

For best executed work on the hand harness loom, first year day classes.

John Prugh Koester.

Honorable Mention: Maurice S. Becker.

Joseph Elias Prize

For highest rating in second year, day silk course.

George Donald Mackay.

Honorable Mention: Frederick Rees Stewart.

Krout & Fite Mfg. Co. Prize

For highest rating in the cotton course, second year.

Coleman Wortham, Jr.

National Association of Cotton Manufacturer's Medal

For general excellence, regular three-year course.

Nelson Theodore Wright.

Phi Psi Fraternity Prize

For best executed work in color harmony and designing, first year day classes.

Samuel Ross Shirer.

Honorable Mention: Fred Herman Heinrich.

Siama Phi Tau Fraternity Prize

For highest rating in chemistry and dyeing, first year day classes.

William Frank Uhlir.

Joseph Elias Prize

To student of first year evening Jacquard class attaining the highest rating.

John Shotwell.

"Textile World" Prize

To student of third year chemistry, dyeing and printing class attaining the highest rating for the year's work.

William Rudolph Gutekunst.

"Textile World" Prize.

To student of evening chemistry and dyeing attaining the highest rating for the full three-year course.

Isaac Percival Davis.

SCHOLARSHIPS—EVENING SCHOOL

MERIT SCHOLARSHIPS—Regular evening textile course.

First Year: Karl A. Schuhle.

Second Year: Harry Leaurendeau.

Summer School at Greenville Patronized by Operatives

GREENVILLE, S. C.—Employes of local textile plants will be paid full time by their mills for two hours each day during the summer while they attend the special adult vocational training school to be conducted at Parker High School for six consecutive weeks beginning July 1, under a plan recently worked out. Only a limited group of men will attend the school under this plan, these being selected jointly by mill and Parker school officials.

A GOOD STORY, BUT—

TEXTILE WORLD'S Atlanta correspondent is a good newspaperman, but his nose for news was a little keener than his nose for facts when he wrote the story about George S. Harris, newly elected president of the American Cotton Manufacturers' Association, published in our May 21 issue.

It is quite true that a firecracker did explode on the deck of a battleship at the time mentioned, and that shortly thereafter Mr. Harris was no longer a midshipman. However, a search of the records reveals the fact that Mr. Harris officially resigned from the Navy and his resignation was accepted by the then Acting-Secretary Theodore Roosevelt. Mr. Harris dislikes to spoil a good story, but TEXTILE WORLD feels it necessary to admit that the court-martial episode was an exaggeration of the truth in regulation tabloid newspaper style.

There are no hard feelings involved, but truth will out.

Machinery Makers Merge

Tolhurst and Willey-Ellis Form Genl. Laundry Machy. Corp.

Two prominent makers of textile finishing machinery have consolidated to form a new company to be known as the General Laundry Machinery Corp. These are the Tolhurst Machine Works with plants at Troy and Green Island, N. Y. and the Willey-Ellis Co. with properties at Chicago, Ill., and Columbia, Pa. The combination will have sales offices in New York, Philadelphia, Chicago, Boston, Atlanta, Kansas City and San Francisco, with selling branches and representation in many other cities in this country, direct branches in London and Paris and sales representation in South America.

The Tolhurst organization was established in 1852, celebrating its 75th anniversary this year. Its extractors have been prominently and favorably known for many years and officials of this company stress the fact that the textile industry will continue to be given the same attention with increasing effort toward perfection and service. The Tolhurst name is regarded as too valuable to be laid aside and the products will continue under that name.

It is also stated that the Tolhurst sales personnel will be retained and that so far as the textile industry is concerned, little effect will be observed as a result of the merger.

The Ellis Co. was established in 1883 and the Willey Co. in 1909. In 1919 the latter acquired the plant and business of the Columbia Mfg. Co. and later combined with the Ellis Drier & Elevator Co. forming the Willey-Ellis Co.

The capitalization of the General Laundry Machinery Corp. will amount to 200,000 shares no par value common stock and $2,000,000 6½% 10-year sinking fund debentures. The stock is being offered for subscription by Bonner, Brooks & Co. at $20 per share and application will be made to list on the New York Curb market. The new company is incorporated in Delaware. The joint balance sheet shows total assets of $3,680,734 with good will, etc. carried at $1.00. Dividends on the new stock at $1.60 per year are indicated by the directors. Many details remain to be worked out and further information regarding the merger will be forth coming later.

Marine Corps Wants Bids on Undershirts and Socks

PHILADELPHIA.—Bids will be received at office of the Depot Quartermaster, U. S. Marine Corps, Broad & Washington Ave., until 11 a. m. June 14, for supplying 100,000 cotton undershirts, as per schedule 677. On June 15 bids will be opened for furnishing 100,000 pairs of wool socks, as per schedule 678.

Fownes Bros. & Co., Amsterdam, N. Y., are now operating at capacity with many additional workers.

Next Year's Greenville Show to Be Held Oct. 15 to 20

GREENVILLE, S. C.—The next Southern Textile Exposition will be held at Textile Hall, Greenville, Oct. 15 to 20, 1928. This textile machinery and power show, given under the auspices of the Textile Hall Corp., of which W. G. Sirrine is president and treasurer, has in prospect an unusual volume of applications for space.

Nainsook Bids for Marine Corps

PHILADELPHIA.—Bids will be received at the office Depot Quartermaster, U. S. Marine Corps, Broad St., & Washington Ave., until June 15, for supplying 200,000 yds., Nainsook, Philadelphia delivery, cloth to conform with schedule 684. Only bids from regular dealers will be considered.

Cotton Commencement at New Bern, N. C., High School

NEW BERN, N. C.—The senior class of the New Bern female department of the high school have decided to observe a "cotton commencement," the girl graduates having decided to wear organdy or voile dresses for the graduating exercises.

Bradford-Durfee Graduates

Prizes Awarded—Alumni Meet and Elect Officers for New Year

FALL RIVER, MASS.

THE annual graduation exercises of the Bradford Durfee Textile School were conducted in the school hall on May 27, when diplomas were presented to 21 students in the day courses and to 32 in the evening classes. Certificates were also presented to nine-day students and about 190 evening students.

John Goss, treasurer of the school corporation, presided at the exercises in the absence of the president, James Sinclair, and made an address of welcome. Remarks of a congratulatory nature were made by Mayor W. Harry Monks and by Edmond Cote, who also presented the prizes donated by him yearly.

The Rev. John Nicol Mark, formerly of Fall River and now of Arlington, was the speaker of the evening and he spoke on "Touchstones of Success."

Prizes Awarded

To Milton A. Comeau, of North Middleboro, was awarded *The Textile Colorist* scholarship of $100 for 1927-28.

The Edmond Cote prizes were awarded and presented as follows:

To Patrick J. Walsh, Jr., Taunton, for the best pattern by a member of the third year, general cotton manufacturing course; Samuel Stone, Fall River, for best original 20 harness dobby pattern, designed and woven by student of second year designing and weaving course; Herman W. Gersch, Jr., South Swansea, for best gingham design by member of second year general cotton manufacturing course; Kenneth R. Booth, Fall River, for best yearly average of student in first year general cotton manufacturing course.

The exercises were closed with a reception and inspection of the school.

Alumni Hold Meeting

The annual meeting of the Alumni Association was held in Hotel Mellon on Saturday evening with over 200 graduates in attendance. Following the serving of dinner Joseph W. Bailey, agent of the Booth Mills and the first principal of the school, gave a brief talk and Principal Henry W. Nichols summarized the activities of the school during the last year.

Officers were elected for the ensuing year as follows: President, Roy Jenkins, Fall River; vice-president, Jacob Uditsky, New Bedford; treasurer, John Hunter, Fall River; secretary, James Giblin, Fall River.

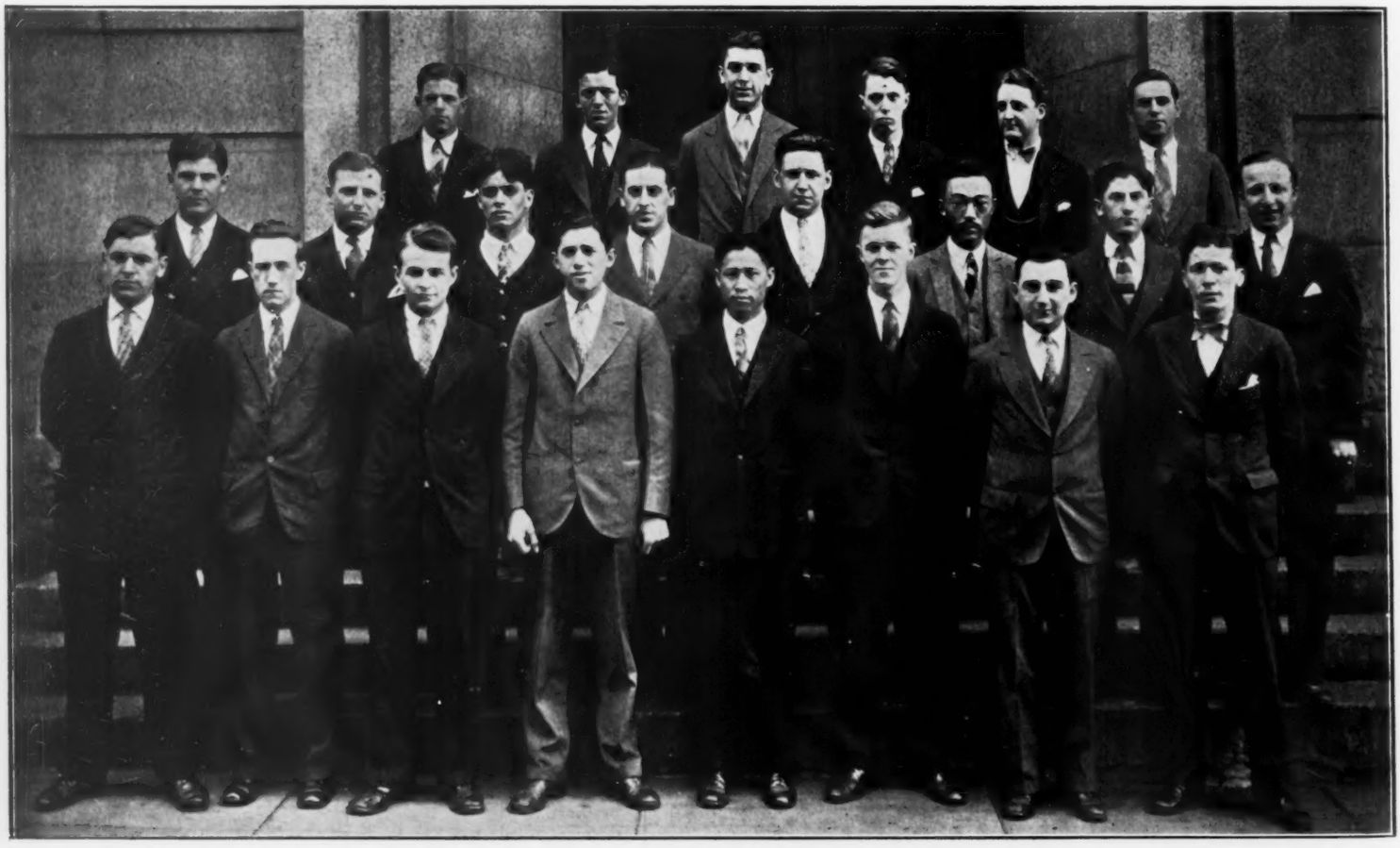
New Bedford Textile School Commencement on June 10

The commencement exercises of the New Bedford (Mass.) Textile School will take place on the evening of Friday, June 10, at the school. Addresses will be made by John P. Meade, director of the Division of Industrial Safety, Commonwealth of Massachusetts and by Joseph K. Milliken, treasurer, of the Mount Hope Finishing Co., North Dighton, Mass.

Central Maine Textile Outing

The annual outing of the Central Maine Textile Association will be held July 16 at the Belgrade Lake (Me.) Hotel. The Androscoggin Association has been invited to attend and to take part in the athletic program.

GRADUATING CLASS OF BRADFORD-DURFEE TEXTILE SCHOOL, FALL RIVER, MASS.



FIRST ROW, Reading left to right: Patrick J. Walsh, Taunton, Mass.; Raymond C. Sullivan, Fall River; Aime P. Marquis, Fall River; Harry Gordon, Fall River; Hisong Choy, Korea; Vincent J. Kelly, Fall River; Joseph H. Strolsky, Fall River; Benjamin Kalsman, Fall River.

SECOND ROW, Reading left to right: Elwood F. Clark, Taunton, Mass.; Samuel Stone, Fall River; Herbert M. Tickle, Fall River; Robert E. Bannister, Fall River; Theodore Guay, Fall River; James M. Yarng, Korea; Harry Burstein, Fall River; David Cohen, Fall River.

THIRD ROW, Reading left to right: Wellington H. King, Somerset, Mass.; Paul A. Connelly, Fall River; Sidney H. Springer, Fall River; Ernest W. Thomas, Taunton, Mass.; Harold J. Bradshaw, Fall River; Harry I. Yoken, Fall River.

Expects 15½ Million Bales New Crop Cotton and Believes 16½c Logical Working Basis

Forecast on Trend of Raw and Manufactured Cotton by Dr. Lewis H. Haney

THE two outstanding factors working in the cotton market are the outlook for the new crop and the demand for cotton textiles. The new crop is now the vital factor and this makes the market predominantly a weather affair. The weather affects not only the crop, but incidentally the demand for cotton goods. During the last month, in spite of the rather backward textile demand, cotton prices were forced up to around 16.75c for spot cotton at New York, entirely by crop news. More recently indications of a fairly good start on the new crop have in turn brought some reaction.

On the other hand, the markets for yarn and goods are relatively weak, the supply being ample in case of most descriptions of these commodities, and buyers being skeptical as to a sustained advance in the raw material. Recently some improvement has been forced by higher raw material, but any considerable reaction in cotton would check the upward trend.

Our general position is that the probable reduction in the crop and the large volume of exports and domestic consumption, have raised the fundamental basis of cotton values, which at the beginning of the year we placed at around 14½c, up to at least 16c. The chief question now is, will the demand for the products of cotton support higher values.

Bull Points

The chief bull points at present are as follows:

(1) The new crop is likely to be considerably less than last year. The flood damage is now estimated to mean a reduction in the crop of about 500,000 bales. The consensus of opinion continues to be that the acreage will be at least 10% smaller. While the condition of the crop at present appears to be about the same as a year ago, ***it is felt that there is considerable prospect of a reduction in the final yield due to a heavy weevil emergence, a smaller use of fertilizer in most sections, and the lateness of the crop in considerable areas. Probably, however, the most serious factor of this kind at present lies in the long continued drought in West Texas.***

(2) Exports continue at a high rate. It is now certain that exports of American cotton will run to at least 11,000,000 bales. As reported at the end of last week, the figure was 10,281,740 bales, which exceeds the exports at the same date last year by over 2.8 million bales.

(3) Domestic consumption continues large and is practically certain to amount to around 7,000,000 bales.

(4) It is now certain that the domestic carry-over will be only about 3.7 million bales.

(5) Interior stocks of cotton are considerably smaller than a year ago, being reported a week ago at about 600,000 bales less. Holders of cotton appear to have firm ideas and interior spot markets are strong.

(6) ***There is some tendency to buy cloth ahead and a growing interest in future deliveries indicates the possibilities for improved buying, should further advances in the raw material develop.*** A good many mills have more orders on hand than in many months. The lightweight underwear business is reported to be good.

Textile World Analyst

An analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, who considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

SUMMARY—COTTON

1. The most reasonable guess as to crop possibilities now seems to be around 15½ million bales, which would indicate that a value of about 16½c for spot cotton at New York would be a logical working basis.

2. Yarn and cloth markets show inability to respond fully to cotton values, but when it becomes recognized that cotton is really worth 16c or a little more, the textile products must sell higher—particularly when spinners have used up the cotton bought at cheaper prices.

Bear Points

On the other side of the picture, we have the following points:

(1) As anticipated, the effect of the flood has been exaggerated. The northern part of the flooded area is already free from water. Little difficulty is reported in securing seed, and the loss of work animals has apparently not been as great as feared. Planting in the mud is proceeding as the water recedes with good hopes of satisfactory results. The reduction in the crop on account of the flood, which was feared would run to 1,000,000 bales, is now figured at less than half that amount.

(2) The world visible supply of American cotton on May 27 is reported as 5,007,000 bales which compares with only 3,448,200 bales a year ago. This figure certainly seems ample.

(3) ***Favorable progress has been made on the new crop outside of the flooded areas.*** Weather conditions have on the whole been quite favorable. While rains are needed in parts of Texas, the outlook in most of Southeast and Alabama is good.

(4) The cold rainy weather in large parts of the country has hurt the sale of cotton fabrics. ***Orders for finished goods are relatively small and do not appear to be sufficient to support much higher prices, especially as production is high in comparison.*** The ratio of orders for finished goods to billings is low, and stocks have increased.

(6) Yarn prices have shown inability to advance in proportion to the rise in raw cotton, reflecting over-production and weakness in the demand for cotton textiles.

There can be little question but that, on the basis of present information, one must conclude that the supply of cotton is ample to meet all prospective requirements and that, aside from the usual crop scares and their temporary effects on the speculative market, prices have reached a level high enough to bring out all the cotton that will be required. The price of 17c appears to have been ample to discount the worst conditions that can be seriously contemplated down to date.

Statistical Position

The domestic statistical position of cotton at the end of April was not materially changed from

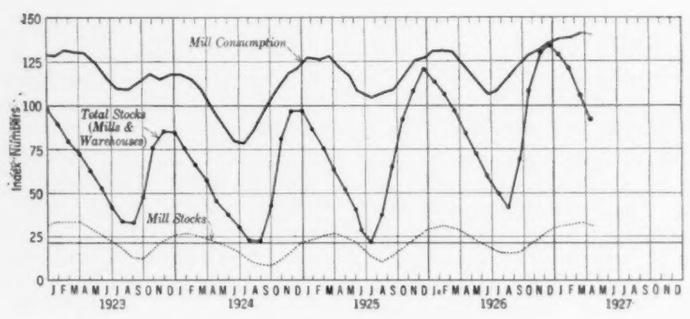

Mill Consumption
Total Stocks (Mills & Warehouses)
Mill Stocks
Index Numbers
150
125
100
75
50
25
0
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1923
1924
1925
1926
1927

Fig. 1. MILL AND WAREHOUSE STOCKS OF COTTON AND MILL CONSUMPTION—Mill Consumption adjusted for seasonal variation, three-months' moving average; 1921 = 100. Total Stocks on hand at end of month, consuming establishments, public storage and compresses; 1921 = 100. Mill Stocks on hand at end of month in consuming establishments; average per cent mill stocks were of total in 1921 = 100. (All of above data from the Dept. of Commerce. Figures on linters excluded.)

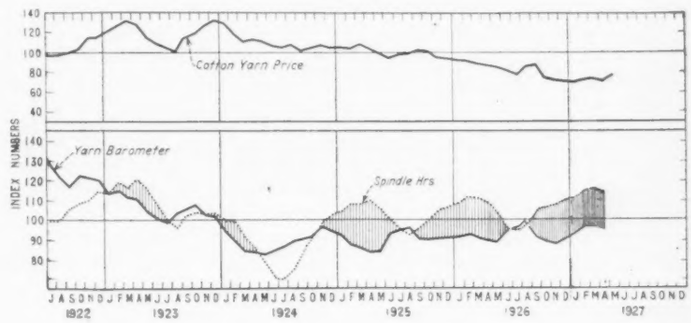

Cotton Yarn Price
Yarn Barometer
Spindle Hrs.
INDEX NUMBERS
140
120
100
80
60
40
130
110
90
J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1922
1923
1924
1925
1926
1927

Fig. 2. COTTON YARN BAROMETER—Cotton Yarn Price—TEXTILE WORLD Index. Spindle Hours—Three-month moving average (Dept. of Commerce). Yarn Barometer—Based on orders for cotton cloth. Average of recent years = 100 for all indexes.

that of the preceding month. At the end of March, the average available per month for domestic mills during the remainder of the season was 2,045,000 bales. At the end of April the figure becomes 2,247,000 bales, which compares with an average monthly available at the end of April, 1926, of 1,999,000 bales. Thus, at the same time that it is recognized that exports and domestic consumption have largely reduced the supply, it must be realized that the supply is still ample and promises to leave a carry-over materially larger than that of a year ago.

Our hypothetical working guess concerning the prospective new crop is now larger than that of a month ago. Private reports make it seem improbable that the reduction in acreage will be much greater than 10%, while the condition appears to be considered about as good as a year ago. If we allow for a 12% reduction in the crop from last year, the total would be over 15½ million bales. Or, if we guess the acreage to be about 44 million and the yield to be about 170 pounds per acre, the crop would be about 15,000,000 bales. ***We are inclined to think that the best guess is about 15½ million, and if we add to this a reasonably certain carry-over of at least 3.7 million, we get a total of 19.2 million, which certainly seems ample.***

If we now inquire what this assumption as to the supply would mean in terms of value, we must conclude that moderately higher prices are indicated from the supply side. A large disappearance, the reduction in the carry-over, and the curtailment of the new crop have materially changed the situation from that which appeared to exist at the end of 1926. About 14½c for New York spot cotton was right at that time, as the course of the market proved. At that time the market probably was made on the assumption that the available supply would figure around 20 million bales. Certainly when it became known toward the end of the year that last year's crop plus carry-over would amount to 21½ million bales, the price fell to below 13c. Now, however, the hypothetical prospect is for something like 19.2 million bales and in our judgment, considering supply alone, the change in conditions would indicate a basic value of between 16 and 17c,—about 1 or 1½c up from the 14½c level, or 4c up from the 12.8c level.

As stated a month ago, ***the market is in a position to respond to crop scares and might run up to 18c temporarily, although we would regard that as high. There is a reasonable probability of its attaining the 17c level, and a strong probability that after a period of reaction it will average over 16c for spot cotton at New York.***

But the demand must be taken into consideration, and there are clear indications that the market for textiles is limited. The evidences appear in the relatively small advance in yarn and goods and the low margins now received by spinners and weavers. Buyer resistance is clearly strong. This is confirmed by most available statistics, such as wholesale dry goods sales, the sales of New York cotton jobbers, and the orders for finished goods. Reports from Manchester, England, indicate the same condition. These evidences are to some extent offset by other data such as the bullish figures put out by the Association of Cotton Textile Merchants of New York, which show large and increasing unfilled orders. The reports of inquiries for future deliveries up to September indicate possibilities. Moreover, advances have occurred during the last two or three weeks in gray goods, muslins, flannels, denims, and combed yarns.

With more seasonable weather and greater certainty as to the trend of business in general (and particularly with a good possibility that the general level of commodity prices will show an upward trend before long) there are prospects for improvement in the demand for cotton textiles. During the near future, however, the present backward markets are likely to continue and advances will be kept small by the fact that the production of textiles is on the whole a little too large in comparison with the present rate of buying.

All of which is to say that during the near future, the strength on the supply side will be limited by demand conditions.

Yarn Due for Higher Prices

The price of cotton yarns, judged by the TEXTILE WORLD index, averaged slightly lower in April, the index being 72.9% of the 1921 average against 73.5% in March. More recently yarn prices have been advanced, so that the May index shows a considerable gain. Yarn prices are considerably below a profitable level, however, on the basis of replacement values.

There has been a notable failure of the yarn demand to support an advance in proportion to that in the raw materials. The demand from the manufacturers has been backward. Moreover, spindle activity has continued at a high rate, the April spindle hours being nearly 6% over the same month of 1926, and considering the season, not far below peak levels. Perhaps there has been an increase in speculative buying of yarn, but at present spindle output appears to be too high in comparison with the activity in goods.

We are nevertheless of the opinion that yarn must sell higher. The April average was about 6c per pound too low in comparison with the raw material, if it be figured that at current prices spinners should have a spread over the raw material of about 23c on the average. One trouble has been that spinners operating on cheaper cotton have been willing to shade the market, particularly on the less wanted kinds of yarn. At the same time, buyers have been hesitant and strongly resisted advances. Thus higher raw materials have been slow in forcing up yarn prices, but if we are correct in our estimates as to the probable level of raw cotton prices, yarn will be selling several cents higher by Fall.

Cloth Prices Likely to Work a Little Higher Due to Higher Cotton

Gray goods also have failed to reflect adequately the higher raw materials. The April index was actually a little lower than that in March and the recovery in May has not been sufficient to give manufacturers an adequate margin on a replacement basis. This condition has been largely due to the fact that, allowing for seasonal conditions, orders for finished goods have shown no gain and have been but little above a year ago, while billings have increased and are relatively high in comparison with orders. Stocks of finished goods, too, are reported to have been over 2,000 cases larger at the end of April than in the preceding month.

As in the case of yarns, however, we are of the opinion that cloth must sell higher. On a replacement basis, the average of staple cotton cloths in April was such that the price was about 4c too low per pound of cotton content to allow satisfactory profits to the manufacturers. The Association of Textile Merchants of New York reports that unfilled orders are much above a year ago, and have recently increased. They are relatively high in comparison with production, while stocks of goods are much under a year ago. The manufacturers have exerted steady pressure for higher prices and have succeeded in securing advances on denims, flannels, and certain branded muslins. While buying at the highest prices has been hesitant, a little more interest has been displayed in future deliveries and it seems but a question of time before definitely higher levels will be obtained.

The rise in cotton textiles thus far has plainly been forced by increased prices of raw cotton and not by demand conditions. There are, however, sufficient indications of improvement in the latter to indicate that the markets for goods will gradually become strong enough to support raw cotton at from 16 to 16½c. The gain in future inquiries suggests this. For a little while yet, the competition of textiles produced from cotton bought at 13–14c will act as a drag on the market. Continued unfavorable weather may hurt the sale of goods. Doubtless buyers will hold off as much as possible for a time, pending the more definite establishment of the higher raw material levels.

Motion Picture

Four Reels Show Manufacturing Processes of Cotton Industry

A four-reel motion picture entitled "From Cotton to Cloth," has been prepared by Harding, Tilton & Co., McCampbell Department, 320 Broadway, New York, and is being supplied to sellers of textiles, manufacturers of work clothes, wholesale and retail associations, and others, without charge. It offers to salesmen and executives in the clothing industry a complete story of the spinning of cotton yarns, weaving, dyeing, and finishing of cotton goods.

The picture starts with the raw cotton as it comes from the fields, and ends with the finished bale of dyed khaki, ready for cutting up into work garments. The picture was directed by a staff of textile experts headed by James W. Cox, Jr., well known engineer and textile specialist, New York. It was filmed at the Augusta, Enterprise, Sibley, and Graniteville mills and the Gregg Dyeing Co.

Outerwear Knitters to Have Night at Monte Carlo

The Atlantic City convention of the National Knitted Outerwear Association June 23 and 24 promises to bring out a large attendance. The generally satisfactory business outlook has put a new spirit into knitted outerwear.

The annual banquet will be featured by an address on "Profitable Prices and How to Get Them," by W. L. Churchill, who will conduct a demonstration class at the close of his remarks.

Following the banquet, the delegates will enjoy a Night at Monte Carlo. Deep mystery surrounds this announcement. The reservations indicate an unusually big gathering.

Active Wool Machinery for Month of April

WASHINGTON, D. C.—The Department of Commerce has announced statistics on active and idle wool machinery for April, 1927, based on reports received from 908 manufacturers, operating 1,086 mills. This is exclusive of 7 manufacturers, operating 12 mills, who failed to report for the month. The following gives details:

Month	Looms: Wider than 50 in. reel space	Looms: 50 in. reel space or less	Looms: Carpet and rug	Sets of cards	Combs	Spinning spindles: Woolen	Spinning spindles: Worsted
PER CENT ACTIVE OF TOTAL NUMBER OF MACHINES							
April, 1927.	57.4	65.5	66.5	77.1	70.4	74.6	65.0
Mar., 1927.	60.2	66.5	67.0	77.2	74.7	74.8	68.9
April, 1926.	59.7	68.0	71.1	75.4	68.8	71.8	65.6
PER CENT ACTIVE OF TOTAL HOURS (MAXIMUM SINGLE-SHIFT CAPACITY)							
April, 1927.	57.1	60.4	66.9	78.1	77.3	77.1	63.5
Mar., 1927.	61.2	63.4	66.4	79.9	81.4	76.7	66.2
April, 1926.	58.7	61.8	63.3	74.8	73.1	71.6	62.3

Editors
Charles H. Clark Vernon E. Carroll
Clarence Hutton Douglas G. Woolf

EDITORIAL

We Believe
In the Conservation and Protection of Domestic Industries

A Scientific Price Basis

THE futility of basing costs upon 100 per cent operation of the plant, when it is possible in so many instances to run only 60 to 70 per cent has been a matter for general discussion for a long time, especially in the wool manufacturing field. But the trouble is much the same as in Mark Twain's historic remark on complaint about the weather—nothing seems to be done about it.

But in this case it would appear more or less positive action may be taken with the advent of the coming season looking to a more scientific basis of prices predicated upon the actual and not the theoretical operation of machinery.

Of course it is natural there should be difficulties in the working out of such a basis. Naturally also these difficulties appeal to the larger factors in the industry with perhaps more force than to the smaller units. There may be a certain amount of logic in the argument of the former that if their prices are to show a reasonable profit based on the actual percentage of their operations they might find themselves in the position of carrying the umbrella for their smaller and perhaps weaker competitors.

But it would seem as though this were a short-sighted policy. It is to be supposed that the larger mills with volume production have lower costs than the majority of smaller manufacturers. If these producers determine upon prices which will not mean an actual loss, but at the same time will not involve any fancy profits it is not likely that the small manufacturer will continue to undersell them materially for any length of time. Given the chance of a profit the average manufacturer should welcome any decision by the leaders to blaze a trail for profitable quotations on their products.

It is coming to be realized more and more that the buyer is not particularly interested in low prices in so far as they mean constant changes to an ever lower level. They would prefer to pay more for their goods if they could be assured that they or their competitors would not be besieged by other sellers to buy at reductions. Such procedure makes for uncertainty and ultra-conservatism in buying. Besides it reacts upon the seller in the primary market. The clothier may be given the opportunity to prove the sanity of his attitude in reference to prices which will show a profit to the mills if the plans which are in progress for next season reach a satisfactory culmination and if the spirit of cooperation is sufficiently exhibited by various members of the wool goods selling trade.

* * *

The Corporation Tax Cut

WITH a treasury surplus at the close of the current fiscal year of approximately $600,000,000 Congress will have no excuse for further delay in radical reduction of the Federal corporation tax and in the repeal of the Federal estate tax and the so-called nuisance taxes. The cut suggested in the corporation tax by the special committee on taxation of the Chamber of Commerce of the United States, of which James R. MacColl, president of the Lorraine Mfg. Co., Pawtucket, R. I., is chairman, is from 13½ to 10% and should have the hearty and practical endorsement of the whole textile industry.

On the basis of returns for 1926 it is estimated that such a reduction in the Federal corporation tax would amount to approximately $325,000,000, leaving a margin of $275,000,000 for reductions in other directions, which would be ample to cover the elimination of the other taxes mentioned, and would also absorb warranted reductions on incomes from $30,000 to $75,000.

Senator David A. Reed of Pennsylvania, with many other members of Congress, favors a cut of only 1% in Federal corporation taxes, but believes that no man ought to pay more than 10% of his income to the Government in peace times. Certainly if a maximum surtax of 10% upon individual incomes is fair in peace times, then the imposition of more excessive corporation taxes is a direct burden upon productive enterprise, is wrong in principle and retards the economic development of the country.

THE TEXTILE TREND

Cotton Markets: Strong upsweep in prices is in progress. Stimulus has been from raw cotton end, supplemented by large forward business. Denims up ½c; flannels, hickories, coverts, etc., up ½ to 1c; print cloths up ⅛ to ¼c; sheetings up ⅛ to ⅜c. Ginghams and percales on brink. Conservative sellers tried to restrain advance, but fact that cotton appears well established at 16.50c makes it necessary to equalize prices based on 14c cotton or less.

Wool Markets: Merchants continue efforts to clean house. Talk of figuring real profit into cloth prices. Endeavor to cut abuse of reference samples. Want late openings for spring, 1928, season but willing to cooperate with buyers. Freer movement in outerwear yarns and better demand for dress goods counts developing.

Knit Goods Markets: Higher prices on cotton yarn will soon force advance in cotton and mercerized hosiery. Sellers cannot accept old prices without incurring loss. Silk hosiery steady and well sold. Fancies in men's goods prominent. Southern underwear mills withdraw cheap cotton ribs for fall while another producer advances by 25c. Balbriggans well sold through July for current season.

Silk Markets: Falling off in georgettes not entirely compensated by increase in satins. Mills book satisfactory forward orders for satins, but prices are too low to give more than even break. Spring business nearly completed, and flat crepes and georgettes have had their big run. Some mills curtail due to unsatisfactory prices on staple goods.

It is not too early to let your Congressman know how you feel regarding Federal tax reduction, or to take steps to have the various textile associations go on record with resolutions favoring the reductions mentioned.

* * *

Sound Principles Never Die

THE Wool Council is dead. Long live the Wool Council!

Kings die, but their policies, if sound, are perpetuated and operate to the lasting benefit of their people. The major policies of the Wool Council are sound and they will be perpetuated because of their soundness.

Strong groups of manufacturers working quietly within certain of the industry's leading associations are hopeful of putting into effect stabilizing policies that were among the objectives of the Wool Council.

It is idle to indulge in surmise as to the cause of the demise of the Wool Council. It is sufficient to be satisfied that its most important plans for the benefit of the industry live, and that with expert and diplomatic handling, and with demonstrated ability and willingness of a major portion of the industry to cooperate, they soon may commence to work for the stabilization and prosperity of the whole woolen and worsted industry.

The Wool Council is dead. Long live the sound policies that were its main objectives!

* * *

Must Check Local Taxation

NOW that there is every probability of a substantial decrease in Federal corporation tax rates, increased attention must be given to the problem of holding within reasonable bounds State, county, municipal and other local expenditures and the rapidly mounting tax rates resulting therefrom. A study of Federal, State and local taxation just completed by the National Industrial Conference Board of New York City shows that, while the Federal Government, in the face of tax reduction enacted in 1924, collected $3,207,000,000 in the fiscal year 1926, compared with $2,966,000,000 in 1925, State and local governments collected $5,292,000,000 in 1926 as compared with $4,925,000,000 in 1925. State and local government tax bills have increased from year to year without a halt since the world war, as has their indebtedness also.

But these figures do not take into complete account the financial burden assumed by our citizens through their public expenditures, for total governmental expenditures as compiled by the Conference Board are more than three billion dollars in excess of total tax collections, a large part of this three billion dollars representing borrowings by State, municipal and other local governmental agencies. In the fiscal year 1925 State and local governments were responsible for 52.6%, or more than half of all public expenditures, but they collected only 48.4% of all taxes, while the Federal Government was responsible for 34% of all public

expenditures, but collected 37.6% of all taxes. The total tax bill of each individual gainfully occupied in 1926 was $196.87, of which $74.29 was the share of the Federal Government, $27.98 that of the States and $94.60 that of local governments.

For the textile industry the problem of State and local taxation is no less serious in some of the newer industrial States, like North and South Carolina, than it is in New England, and particularly in Massachusetts, where the local tax rate per spindle is seldom less than 75c and ranges as high as $1, thus making all the difference for many corporations between a profit and a loss. The mills of the textile towns and cities of New England always have borne a major share of the tax burden, and it is difficult to demonstrate to local people, that, under present adverse conditions, this is no longer possible if the mills are to continue in business. In the newer industrial centers of the South the textile mills are being made the target of increasing local expenditures and taxation just as the New England mills were 50 to 100 years ago. In neither section can the people both have their cake and eat it. In a mature industrial section it will kill existing industries, and in newer industrial sections it will discourage productive enterprise and retard economic development.

S. T. A. Program

Interesting Speakers Listed for Meeting at Ashville, June 17–18

The annual meeting of the Southern Textile Association will be held at Kenilworth Inn, Asheville, N. C., June 17 and 18, as previously reported. The meeting will be called to order Friday morning, 10 a. m., June 17, with the president, W. H. Gibson, Jr., manager and superintendent of Aileen Mills, Biscoe, N. C., presiding.

The program for the meeting will be as follows:

Friday Morning Session, June 17, 10 A. M.

President's Address: W. H. Gibson, Jr., mgr. and supt., Aileen Mills, Biscoe, N. C.

Report from Chairmen of Sectional Divisions:

Carders' Section: J. O. Corn, supt., Hampton Dept., Pacific Mills, Columbia, S. C.

Spinners' Section: Carl R. Harris, asst. supt., Inman (S. C.) Mills.

Weavers' Section: L. L. Brown, supt., Clifton (S. C.) Mfg. Co.

Master Mechanics' Section: H. H. Iler, master mechanic, Newberry (S. C.) Cotton Mills.

Report from Eastern Carolina Division of Southern Textile Association.

Report from Texas Textile Association (affiliated with Southern Textile Association).

Address: "The Buyer's Viewpoint in Purchasing Goods, and the Selling Value of Quality and Uniformity of Product," Richard G. Conant, Wellington, Sears & Co., Boston, Mass.

Address: "Human Relations in Industry," H. G. Winget, Victory Yarn Mills Co. and Winget Yarn Mills Co., Gastonia, N. C.

Friday Afternoon

Golf Tournament: Friday afternoon will be open. However, there will be a Golf Tournament for those who wish to participate. The winner of this tournament will receive a loving cup which will be awarded at the banquet Friday night. The tournament will be conducted by a Golf Committee consisting of the following: W. W. Moore, Allis-Chalmers Mfg. Co., Charlotte, N. C., chairman; Fred Crowell, E. H. Best & Co., Greenville, S. C.; Sam Rakestraw, National Gum & Mica Co., Athens, Ga.

Friday Evening

Banquet at the Kenilworth Inn.

Address: "Relation of Church to Industry," Rev. J. W. Speake, Spartanburg, S. C.

Awarding of Loving Cup to Winner in Golf Tournament.

Saturday Morning Session, June 18, 10 A. M.

Address: "Work of The Cotton-Textile Institute," George A. Sloan, secretary, New York City.

Remarks by the presidents of the State Cotton Manufacturers' Associations.

J. M. Gamewell, president, North Carolina Cotton Manufacturers' Association.

J. C. Evins, president, South Carolina Cotton Manufacturers' Association.

W. H. Hightower, president, Georgia Cotton Manufacturers' Association.

Business Meeting:

Secretary's Report.

Report from Special Committee.

Election of Officers.

Next Meeting Place.

Presentation of Emblems and Medals

Arkwrights—These will be presented to those who have submitted tests and have had them approved by the Research Committee and have been elected to full membership into The Arkwrights.

Service Medal—This medal is given annually by S. B. Alexander, Southern Agent, Crompton & Knowles Loom Works, Charlotte, N. C., to the member of the association who has done the most during the past year for the betterment of the industry.

President's Medal—Given annually to the retiring president.

Globe Dye Works, Philadelphia, have awarded contract for the erection of an addition to their dye-house to Wintz Bros., Inc., constructors. New section of the dye-house will be erected at Kinsey & Worth Sts., costing $12,000.

Need of Textile Research

If Good for Other Industries, Why Not for Textiles

"If research is good for other industries, why not for the textile industries?" asks M. D. C. Crawford in the *Daily News Record*. After noting the results of scientific research of large corporations in other industries, which as he says, "are not guessing at their business," but "are basing their actions on scientifically proved conclusions," he comments upon the status of the textile industry as follows:

Pariah of Modern Industry

"The cotton industry was the first to enter the modern industrial era of division of labor, the application of power to machinery, etc., in the 18th century. For 50 years its growth, changes in system and detail were infinite. For the last generation we have remained almost static. There have been improvements in detail but not in principle. Evidently the entire textile industry is satisfied that we have reached the ultimate in process and machinery. This may be true, but nobody can prove it. Nowhere in the entire industry is there a parallel to the splendid organizations I have so briefly described. The Laundrymen's Association has, indeed, endowed a fellowship in the Mellon Institute to improve laundry work. But, to expose textile short comings, there is no seat of learning with the grade of university where there is a chair endowed for research in the general textile industry.

"It is either perfect—beyond improvement—or modern method of improvements are beyond its grasp. It is the Pariah of modern industry.

Scientific Research Needed

"I feel, of course, that a solution of the textile problems does not rest entirely in mechanical perfection. But certainly scientific research into methods, systems, machines and processes is one of the vital problems open for consideration at this time. I cannot conceive, in this age of scientific attainment, with the fruits of research so evident in other industries, why research in the fields of textile has not been heavily endowed and vigorously pushed. The system of production is virtually the same as when Richard Arkwright built the first power mill in 1775. We have enlarged, expanded, elaborated, if you will, but the principle is the same. Are these principles then as unchanging as the laws of mathematics?

Annual Waste Exceeds Cost

"The wastage of a single season in handling as expensive a raw material as cotton would no doubt pay for the endowment of adequate research facilities for an indefinite period of years. It seems to me that the whole basis of serial mass production rests on an absolute knowledge of the best methods of combining labor, power and raw material and a very clear understanding of and respect for the public's judgment on the accomplishment."

C. R. Miller Reelected President of Texas Association

DALLAS, TEXAS.—C. R. Miller, president of the C. R. Miller Mfg. Co., was reelected president of the Texas Cotton Manufacturers Association on May 26, at an executive meeting of the group here.

Other officers elected were: J. Perry Burrus, Dallas, first vice-president; Clinton Phelps, of Sherman Cotton Mills, Sherman, second vice-president; W. L. Steele, of Brazos Valley Cotton Mills, West Texas, secretary; Sidney Files, Itasca Cotton Mills, Itasca, treasurer. Eight members representing about 15 Texas mills were in attendance. Other members present besides the officers were: A. Culberson, of the C. R. Miller Mfg. Co.; Walter Hogg, of Dallas Cotton Mills; A. L. Smith, of the Hillsboro Cotton Mills, and R. S. Porter, of the Merchants' and Planters' Mills, New Braunfels, Texas. A report of the accomplishments of the association during the last year was made by Mr. Miller.

John W. Carter, president of Texas Power & Light Co., and member of board of trustees of Texas Technological College, Lubbock, Texas, emphasized the importance of cooperating with work of that school. It was decided to hold meetings every three months, the next to be held at Fort Worth, Sept. 22.

TEXTILE CALENDAR

Associated Knit Underwear Manufacturers of America, Semi-Annual Meeting, Hotel Utica, Utica, N. Y., June 16-17, 1927.

Southern Textile Association, Annual Meeting, Kenilworth Inn, Asheville, N. C., June 17-18, 1927.

National Knitted Outerwear Association, Annual Convention, Hotel Ambassador, Atlantic City, N. J., June 23-24, 1927.

Cotton Manufacturers' Association of North Carolina, 21st Annual Meeting, Grove Park Inn., Asheville, N. C., June 24-25, 1927.

Cotton Manufacturers' Association of South Carolina, Annual Meeting, Grove Park Inn, Asheville, N. C., July 1-2, 1927.

Second Annual Exposition of Hosiery and Underwear, Waldorf-Astoria, New York, July 18-23, 1927.

Chemical Industries Exposition, Grand Central Palace, New York, Sept. 26—Oct. 1, 1927.

Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 15-20, 1928.

TEXTILE WORLD Cotton and Wool Index Numbers

COTTON INDEX NUMBERS

Date 1914	Cotton	Yarns	Gray Goods	Colored Goods	Aver. for Cloths	Group Average
July 31.....	100	100	100	100	100	100
1919						
January	235	278	280	295	288	279
April	228	221	228	238	233	226
May	237	250	266	241	253	247
July	283	321	372	292	330	321
October	278	324	387	320	351	337
1920						
January	314	448	464	411	435	427
April	339	531	498	416	455	460
May	332	545	475	421	446	456
July	327	425	405	423	414	407
October	190	229	248	362	308	282
1921						
January	131	142	176	203	190	175
April	97½	116	138	182	161	147
May	102	115	131	174	156	143
July	97½	112	133	176	155	141
October	160	179	198	208	203	193
1922						
January	146	168	174	206	191	182
April	144	156	168	209	189	178
May	143	165	178	206	192	182
July	178	182	190	200	195	189
October	177	192	206	201	203	197
1923						
January	225	225	220	230	225	225
April	231	239	224	242	233	234
May	217	217	209	240	225	223
July	217	197	190	236	212	211
October	237	222	212	225	219	219
1924						
January	278	241	228	243	236	239
April	220	211	192	194	193	198
May	249	207	190	193	192	197
July	270	198	186	191	189	196
October	195	196	187	189	188	190
1925						
January	192	197	195	173	184	187
April	196	194	193	180	187	188
May	187	186	185	178	182	183
July	197	183	185	176	181	182
October	174	189	193	178	186	186
1926						
January	167	175	177	162	170	171
April	153	163	161	155	158	159
May	151	157	158	153	156	155
July	149	149	151	141	146	147
October	106	141	147	144	146	143
1927						
January	107	134	140	140	140	138
February ...	113	136	143	141	142	140
March	114	137	144	142	143	140
April	118	136	143	142	143	140
May	128	142	145	142	143	143

THE MAY INDEX NUMBERS

THERE was a further moderate decline in the index numbers of wool, tops and yarns during May and no change in the wool cloth index. The indices of the cotton group, on the other hand, have continued their upward movement under the influence of a 10 point rise in the raw cotton index and with yarn and cloth production well covered during the summer months.

The indices based upon averages for the last week of May are more accurately reflective of the advance in the cotton group and are as follows: Cotton, 133; yarns, 146; gray goods, 147; colored goods, 143; group average, 144. Compare these indices with those for the third week of last September when cotton was slightly lower and it can be seen that yarns and cloths remain relatively cheap: Cotton, 132; yarns, 157; gray goods, 159; colored goods, 144; group average, 152.

In the wool group there was no change from the monthly average in the last week of May except in wool and tops, which were each a point lower. Wool prices were then almost identical with the lows of July last year, but tops at the close of last July were two points, yarns eight points and cloths two points higher than at the end of last month.

There may be something significant in this when also considered in connection with the remarkable stability of values since June, 1926. Since then the wool index has fluctuated within a range of only six points; tops, seven points; yarns, 12 points; cloths, six points.

Inquiries regarding interpretation and use of the index numbers may be addressed to TEXTILE WORLD, Statistical Department, 65 Franklin St., Boston, Mass.

WOOL INDEX NUMBERS

Date 1914	Wool	Tops	Yarns	Cloth	Group Av'ge
July 31.....	100	100	100	100	100
1919					
January	274	296	290	237	273
April	242	282	273	237	253
May	248	286	285	237	257
July	269	290	238	237	272
October	286	338	384	240	294
1920					
January	304	335	412	310	336
April	276	334	448	331	352
May	272	324	448	331	350
July	241	258	384	320	315
October	189	213	302	304	276
1921					
January	129	148	186	224	193
April	120	148	177	192	173
May	123	143	172	192	172
July	112	139	172	192	170
October	114	135	162	188	165
1922					
January	128	163	179	182	173
April	165	185	185	184	182
May	178	202	190	185	188
July	189	202	196	188	193
October	199	209	208	191	199
1923					
January	212	225	227	203	213
April	222	230	234	225	228
May	222	230	244	233	234
July	222	223	233	228	227
October	205	213	222	224	220
1924					
January	217	227	221	223	223
April	216	230	223	219	221
May	206	223	223	219	219
July	191	209	212	219	213
October	227	237	224	226	228
1925					
January	264	268	253	228	244
April	219	234	230	241	233
May	196	213	217	241	226
July	216	217	216	239	227
October	216	212	212	227	220
1926					
January	215	213	211	229	221
April	181	193	198	224	208
May	177	191	192	224	206
July	173	184	189	215	199
October	178	186	193	209	198
1927					
January	178	187	190	209	198
February	179	186	188	211	198
March	178	183	184	211	196
April	177	182	184	211	196
May	175	180	182	211	195

New Bedford Textile Exhibit

Local Mills Contribute to Gorgeous Exhibit in Institution

In order that the general public and particularly the summer visitors that annually flock to New England, may get a better idea of variety and attractiveness of the fine textile fabrics made in New Bedford, Mass., there has been opened there this week, on Tuesday, the most elaborate and extensive non-commercial exhibit of New Bedford-made fine cotton goods that has ever been attempted outside of a formal exposition.

Nearly all of the forty-five mills making fine cotton goods in New Bedford have contributed some of their products toward the display and by special arrangement with the New Bedford Institution for Savings, which has a big building on one of the most prominent corners in the downtown retail district, the lobby of the bank is being used for the exhibit. It will continue throughout the summer months, being open to the public, free of charge, throughout the time that the bank remains open.

A Non-Commercial Exhibit

Engaged for three-quarters of a century in the manufacture of cotton goods, New Bedford during the past forty years has become known from one end of the country to the other as America's chief producer of fine cotton fabrics and her mills turn out considerably more than one-half of the goods of this description that are used in the United States. Since each mill is normally producing a wide variety of fabrics itself and the products of the different mills are seldom alike, it would be impossible to show examples of every type of goods made, but a careful selection has been made from each class of fabrics and in every instance the goods are shown in the finished state, ready for the final consumer. Owing to the non-commercial character of the display the individual fabrics are not labelled with the name of the individual mill from which each came, but each type of goods bears a ticket with the name of the fabric and a brief description of it.

Gorgeous Exhibition of Fine Textiles of New Bedford Mills in Lobby of New Bedford Institution for Savings

There are approximately 2300 yards of cloth used in the display, and at least 175 different patterns and styles of fabrics, the arrangement being in panels along the walls of the enormous bank lobby. Some of the general classes of goods shown include plain and fancy shirtings, plain and fancy drapery fabrics some of which are made from yarn as fine as 120s and is woven in lacy open-work patterns, fine sheetings, upholstery fabric of various kinds, including sport material as well as filmy types of goods used for lingerie purposes, children's clothing, etc. A great deal of silk and rayon has been used in mixture with cotton in many of these fabrics.

Through cooperation with the municipal authorities, the board of commerce, the hotels, railroads and steamboat lines, invitations are being extended to all visitors to New England as well as to the year-round residents, to inspect the display at their convenience.

THE PERSONAL PAGE

Clarence W. Jordan has been appointed president and general manager of the Western Cordage Co., Orange, Cal. Mr. Jordan's appointment completes the board of directors, which had been lacking one member since the last annual election. The board of directors is now composed of Clarence W. Jordan, president; Fred A. Grote, vice president; A. W. Swayze, secretary; Fred H. Alden, treasurer, and F. W. Struck, director.

H. F. Jones, president of the Echota Cotton Mills, Calhoun, Ga., has taken over the management of the Shelbyville (Tenn.) Mills and the Columbia (Tenn.) Cotton Mills.

Fred Phillipson, who resigned recently as Chicago manager for the U. S. Worsted Sales Co., is now associated with the American Woolen Co. as their Chicago manager.

James H. Archibald, formerly of the Crawshaw Carpet Co., at Newburgh, N. Y., has accepted the position of tapestry colorist with the Mohawk Carpet Mills, Inc., at Amsterdam, N. Y.

R. H. Duryea, formerly of the U. S. Worsted Sales Co., New York, is now associated with Deering, Milliken & Co.

Edwin H. Marble, president of Curtis & Marble Machine, Worcester, Mass., who is visiting England and the Continent, was the guest, May 13, at a luncheon meeting of the Research, Testing and Inventions Advisory Committee of the Lancashire Section Committee of The Textile Institute, Manchester, Eng., and explained in considerable detail the work of The Textile Section of the American Society For Testing Materials, of which he is a member. Mr. Marble is one of two fellows in this country of The Textile Institute.

Frederick H. Learned, sales manager of the Stowe Woodward Co., Newton Upper Falls, Mass., rubber covered roll manufacturers, sailed last Thursday on the S. S. Belgenland, to attend the Rotary International Conclave at Ostend. He also intends to visit several of the larger textile mills while on a tour of England and the Continent.

Mrs. C. M. Scarborough, honoring officials of the Judson mills, Greenville, S. C., gave an entertainment at the Community house last week. The honor guests were **W. C. Bobo**, general manager of the mill; **J. T. Tidwell**, superintendent, and **F. M. Tidwell**, of Laurens.

Mrs. Franklin W. Hobbs, wife of Franklin W. Hobbs, president of the Arlington Mills and of the National Asoociation of Wool Manufacturers, was elected president of the Women's Republican Club of Massachusetts at the annual meeting of the latter organization in Boston, last week. Mrs. Hobbs had been treasurer of the club since its organization and succeeded Mrs. Charles Sumner Bird, who was the founder and the president of the club since its inception. Mrs. Hobbs is the daughter of **William Whitman**, veteran worsted and cotton manufacturer and merchant, and her three sons are also identified with the industry. Quite naturally she is deeply interested in the future of the textile industry, and to the extent that her official duties make this possible she can be depended upon to work for its welfare. **Mrs. William M. Butler**, Boston, and **Mrs. Andrew G. Pierce**, New Bedford, vice presidents of the club, are wives of prominent New England textile manufacturers.

At Right, Mrs. Franklin W. Hobbs, Elected President, Mass. Women's Republican Club. At Left, Mrs. Charles Sumner Bird, Retiring President

K. D. Wells, of Vicksburg, Miss., has been elected president of the Southern Cotton Shippers' Assn., to succeed **J. B. Cowan.** The board of directors elected consists of **A. M. West, Ed. M. Gueydan, S. Kirby Newberger**, all of New Orleans; **S. B. Wilson**, Memphis; **L. M. Threefoot**, Meridian; **Vernon T. Davis**, Jackson; **John Winter**, Leland, Miss., and **H. R. Murff**, Clarksdale, Miss. The directors elected **Sam Loring**, secretary to succeed himself, and **E. M. Gueydan**, treasurer.

Albert Blum, treasurer of the United Piece Dye Works, with main office at Lodi, N. J., has been elected to the board of managers of the Silk Association of America, Inc., to succeed the late **Dr. August Hunziker.** As successor to Dr. Hunziker in the Textile Alliance, the association's executive committee elected **Horace B. Cheney** to be its representative.

Thomas Dufton, son of William Dufton of Dufton Bros., Spencer, Mass., and Miss Marion Lura Sargent of that town are to be married in the Spencer Congregational Church on June 18.

A. T. Greene was promoted to assistant treasurer of Drayton Mills, Spartanburg, S. C., at a recent meeting of the board of directors.

I. L. Langley, a graduate of the Textile School of the North Carolina State College, class of 1923 has been appointed head of the Cost Department of the Consolidated Textile Corp., Lynchburg, Va., succeeding George W. Duncan who has become associated with The Cotton-Textile Institute. Mr. Langley holds both a bachelor's and master's degree in textile manufacturing from the North Carolina State College. He is a lecturer on cost accounting for the textile school and conducts a series of lectures annually at the school.

Percy Allan McKittrick, assistant treasurer of the Parks-Cramer Co., Fitchburg, Mass., has been elected president of the Rotary Club of Fitchburg. He sailed from New York on May 26 to represent the club at the annual convention of the International Association of Rotary Clubs at Ostend, Belgium, June 5-10.

Paul J. Woodcome, director of the Fitchburg (Mass.) Federal Warehouse for the storage of cotton and wool and Miss Letitia Frances Howell, also of that city, were married in Sacred Heart Church, West Fitchburg, on May 28.

E. H. Davis, who has been assistant manager for several years of the Cotton Research Co., Boston, Mass., has succeeded Walter L. Lowry in the New England-Southern Mills department of Lawrence & Co., at their New York office.

C. W. Gunter, a graduate of the Textile School of N. C. State College, has been appointed superintendent of dyeing and finishing at the Mooresville (N. C.) Cotton Mills.

R. O. Denman, F. J. Maw, R. L. Innes, Mark B. Holton, Walter S. Burrill, A. F. Zimmerman and **Alan V. Young** compose the new board of directors of Zimmerknit, Ltd., Hamilton, Ont., Canada, which was recently purchased by a syndicate headed by R. O. Denman of Denman & Co., Hamilton.

Thomas Bradbury, agent of the Shawsheen Mills of the American Woolen Co., Shawsheen Village, Mass., since that mill was opened by the company several years ago, has resigned. He has been succeeded by **Benjamin Duce**, assistant agent of the company's Washington Mills, Lawrence, Mass.

T. W. Hill, for the last year representative of the Lewis Knitting Co., Janesville, Wis., at Kansas City, Mo., has been appointed sales manager of the Janesville plant.

Alex. T. Herrin, who has been associated with the Renfrew Mfg. Co., Adams, Mass., for several years, has taken a position as assistant general manager of the New York Mills Corp., at New York Mills, N. Y.

C. W. McNealey, until recently superintendent of the Cotton Mills Products Co., Natchez, Miss., has been appointed general superintendent of the Shelbyville (Tenn.) Mills and the Columbia (Tenn.) Cotton Mills. He will make his headquarters at Columbia.

James T. Barker, Jr., superintendent of the Green River Mfg. Co., Tuxedo, N. C., has been appointed postmaster of Tuxedo.

Chandler Withington Jones, Worcester, Mass., and Miss Dorothy A. Minnick, daughter of John F. Minnick, superintendent of the Slater Mills, Inc., Webster, Mass., were married in the Webster Congregational Church, May 28.

Bert Eby, superintendent of the finishing department of the Century Beverly Corp., Pottstown, Pa., has resigned and accepted the position of superintendent of the bathing suit department of Penman's, Ltd., Paris, Ontario, Canada.

Ray K. Cramer will sever his connections as superintendent of the plant of the Van Raalte Co., Saratoga Springs, N. Y., on July 1.

Charles Krebbs has taken the position as overseer of dyeing for the Fairmount Dye Works, Woonsocket, R. I.

AN OUTSTANDING TEXTILE STUDENT

The unusual dual honor of being valedictorian of his class and also of winning the N. A. C. M. medal has come to a student in the Textile School of the North Carolina State College.

France E. Plummer, of Selma, Ala., a senior in the Textile School at State College, will deliver the valedictory address at the commencement exercises next week. Mr. Plummer has been an outstanding student since early in his college career and examination of the college records a short time ago revealed the fact that he led the class of 1927.

In addition to winning scholastic honors, Mr. Plummer has done creditable work in other phases of college life. He has shown an active interest in the work of the Y. M. C. A. from the beginning of his freshman year, and has served as vice-president of that organization during the past year. As a member of the Technician staff he has been a frequent contributor to local publications. His influence has also been felt by the Tompkins Textile Society, where he sought to promote greater interest in technical discussions.

Mr. Plummer's memberships in honorary societies and fraternities include the Pine Burr Society, a local scholarship organization; the Phi Kappa Phi Society, national honorary society; and the Phi Psi, national textile fraternity.

Information has also been given out by Dr. Thomas Nelson, dean of the Textile School, that the student's medal, awarded annually by the National Association of Cotton Manufacturers, has been won by Mr. Plummer. The medal is presented to the textile student showing greatest proficiency in his work. Presentation of this medal will be made during commencement.

After graduation, Mr. Plummer will go to Lynchburg, Va., where he has accepted a position in the cost department of the Consolidated Textile Corp.

Advances in the Mechanical Department

Important Forward Steps Taken in Recent Years Along the Lines of Electric Power, Lighting, Steam Consumption, Humidification, and Materials Handling—Benefits Derived from Use of Anti-Friction Bearings, Improved Motor Drives, Remote Motor Control, and Thermal Circuit-Breaking Devices

*By J. W. Easter**

THE accompanying summary of recent important developments in the mechanical departments of textile mills is worthy of publication in the Annual Review and Forecast Number of TEXTILE WORLD, but obviously cannot be held over eight months for that purpose. It is a stock-taking of the valuable improvements now available to the majority of textile mills. Managers should use such a summary to determine whether or not they are keeping pace with the progress of their industry, and should make certain that they have carefully considered from every angle each opportunity for improved operation.

IF we compare the modern textile plant with a mill of fifty years ago, it is easy to see the tremendous steps forward that this industry has taken. This advance has not been in a single bound, however, but has been brought about gradually by small improvements here and there, most of them hardly noticeable or commented on at the time, and some of them violently opposed by owners and operators. Think of the enormous step forward when the incandescent light was first introduced in mills; yet at the time it was considered unimportant and unnecessary by the majority of manufacturers, and was, in fact, strongly condemned by many.

It is not easy, therefore, to point out with certainty specific advancements in mill operation, and any one so doing takes the risk of having the very thing which he has heralded as a marked advance one year, being entirely cast aside in another twelve months in favor of something he has not even mentioned. It is to be understood, therefore, that the items I speak of in this article may not even include the most important advances made in the past few years and may include some matters which will later not be considered advances at all.

Anti-Friction Bearings

A very considerable item in the operating cost of any textile mill is the cost of power, and any device which will substantially reduce the consumption of power in a plant is a distinct advance in mill operation. The power from the prime mover or the current which is fed into the mill over the high tension lines of the power company is eventually largely dissipated in bearing-friction. The motor bearings, the line-shaft bearings, and the thousands of bearings of various kinds on textile machines themselves each eat up a small share of the incoming power. In the past few years the substitution of roller or ball bearings for the plain bearings has been tried in almost every type of machine and power transmission device. One of the largest textile motor manufacturers has standardized on tapered roller bearings and another on ball bearings. A great many ball and roller bearing line-shaft hangers are now on the market, and textile machinery can, in most instances, be equipped with anti-friction bearings throughout, if this is desired by the purchaser.

The net result of the substitution of anti-friction bearings for the ordinary babbitt bearings is not only a 10 to 20% saving in power but also gives improved operating conditions. An anti-friction bearing needs to be lubricated only once every few months as compared to the daily oiling of the plain bearing. Much less oil is used and there is much less danger of damage resulting from the dripping of surplus oil.

Motor Drives

The application of individual drives to certain machines has been considerably improved. In the case of the spinning frame, twister, and similar drives, the use of a tapered driven shaft, as well as a tapered shaft on the motor, is a distinct improvement. This permits both the driving and driven pinion to be drawn up very tightly on the shaft and prevents these pinions from working loose after a period of use. The tapered driven shaft, in the case of the spinning frame, is accomplished by using a double ball bearing or a very wide plain bearing at the driven end of the frame, which permits the shaft to overhang without requiring an outboard bearing at all. This arrangement also permits the easy removal of the driven pinion, which is sometimes advantageous.

Up to the past two years the term "individual drive" was practically synonymous with chain drive for all machinery except looms. The motor was almost universally connected to the frames by means of an individual silent chain. Within the latter period, however, a type of multiple V-groove belt drive has been put on the market by one of the large motor manufacturers, and this equipment has attained considerable popularity.

Motor Controls

For the control of both small and large motors, the magnetic switch, operated from a control button, is coming more and more into use. This switch permits the location of motor starters at convenient points, where they do not block the aisles in manufacturing rooms and interfere with the orderly and economical spacing of machinery. The location of all switches on one wall of a room, or in a separate switch room, is made possible by their use.

In the case of small motors, up to 10 hp., where the "across the line" type of switch is used, the control switches are now mostly of the air-brake type—the small oil switch being largely replaced. In some instances, on spinning frames and twisters, several push buttons for operating the control switches are placed along the length of the spinning frame, thus eliminating the shifter rod altogether. In other cases a connection between the shifter rod and the control switch is made through a small auxiliary switch.

In the weave rooms, where the motors are usually not over 1 hp. in size, individual snap switches control each motor. Usually, however, a group of 30 or 40 looms is also controlled from one circuit, operated by a magnetic switch located in the distribution room. A push button in the weave room then starts and stops an entire group of looms and the individual switch on the loom is only used during running hours, when a single loom only is stopped.

Almost all motor starters or control switches are now equipped with a device for shutting off the motor under overload conditions. In a great many cases the operation of the device depends on a thermal element. A part or all of the current to each phase of the motor circuit passes through this metal element. It is so designed that when sufficient current is passing through it to dangerously heat the motor coils the element is also heated to the point where its expansion breaks the magnetic contact circuit and opens the motor switch. When the element has had time to cool, the switch can be reset. The motor will by that time also have cooled sufficiently to be operated without danger.

The use of these overload circuit-breaking devices has, to a great extent, replaced the use of fuses for motor protection. These overload devices do not open immediately upon a momentary overload, as fuses are likely to do, but only act when a sufficiently continuous overload current is transmitted to the motor to cause the latter to heat dangerously.

Power Consumption

As manufacturing conditions improve, there is a steady tendency towards increased speeds on all machinery. Power consumption increases rapidly with every step-up on the speed of any machine, and individual drives on machinery are requiring larger and larger motors. Where formerly the 5 h.p. drive was usual on a spinning frame the 7½ hp. motor is now much more common, and many 10 hp. drives are installed on spinning frames, and 15 hp. drives on twisters.

Current Characteristics

Sixty-cycle frequency has become the standard for alternating current distribution systems, and it is becoming more and more difficult to obtain 50, 40, and 25 cycle equipment. While the electric manufacturers continue to make these motors, there is always a considerable delay involved in obtaining them, as well as an extra expense. Moreover, textile machinery and auxiliary equipment, such as fans, pumps, etc., is all being designed to operate with 60-cycle motors at 60-cycle speeds, and the user of other frequencies usually has trouble when arranging proper drives for whatever new machinery he purchases.

Much more attention is being paid to the power-factor characteristics of electrical installations in textile mills. It is a fact that in many cases low power factor is being penalized by the power companies in power contracts, and it is probably true that this practice will be extended. For this reason, care is being taken in electric installations to make use of the available devices for improving power factor, and the use of synchronous motors and synchronous condensers is spreading. More care also is being taken to install the motors of the proper size so as to take advantage of the best part of the motor-power-factor curve. Manufacturers are also attempting to improve power-factor characteristics in designing their motors, and one motor is now on the market which combines the starting and speed characteristics of the squirrel cage motor with a unity power factor or better.

Lighting

Manufacturers are realizing more and more that good light is a very economical investment. Considerably higher lighting intensity is being used now than a few years ago, this being accomplished by the use of larger incandescent lighting units. The standard type of reflector and the spacing of the units has not changed much in several years.

The larger type of lighting unit, with its high intensity filament, would cause considerable eye-strain if it were not for the improved types of non-glare globes now used. The inside-frosted type of lamp is rapidly becoming standard. It is not permanently affected by dirt or grease and, if kept

* Consulting Engineer, Baltimore, Md.

clean, maintains its transparency for the full life of the bulb.

A new type of double-filament lamp is now on the market, which is intended to give twice the life of the single filament lamp, at only slightly greater cost. It consists of the standard type of bulb in which are placed two separate lighting filaments. One of these filaments burns for the normal rating of the standard lamp, and when this burns out a simple device will connect the other filament and this will burn for an additional thousand hours, thus doubling the life of the entire lamp.

The mercury arc lamp has been considerably improved with automatic starting features and greater reliability. On account of its soft non-glaring light and economy of current consumption, it is being used by some plants instead of incandescent lighting.

Steam Consumption Economies

Much more attention than formerly is being paid to economy in the generation and consumption of steam, especially in plants where steam is used for process work as well as heating. The boiler plant is more apt to be a well-planned and well-kept unit, instead of a side issue tucked away in an odd corner. The use of recording instruments for measuring production of steam, etc., is much more common, and real economies are being effected with their aid. Especial attention should be called to the fact that the mill man is beginning to realize that the generation of steam for process work permits the production of power as a by-product at an extremely low cost. The use of bleeder turbines or combination of steam turbines and motor drives, permitting the development of power from steam before the latter is used for heating work, is much more often taken advantage of than formerly.

Humidity

Artificial humidifier equipment forms part of the mechanical equipment of any modern mill. Considerable advance in the reliability and design of this equipment has been made in the past few years. As is the case with lighting, a greater and greater amount of humidity is being used than was formerly thought desirable. The development of the design of humidifier heads has been such that a single head will now evaporate three or four times as much water per hour as was the case some time ago, so that a much higher humidity can be maintained in a room now with approximately the same number of units. The combination of individual electric fans with humidifier heads has become standard practice. This both aids the evaporation per head and increases the circulation of the air in the room, resulting in more uniform conditions.

Humidifier systems are now almost invariably automatically controlled, permitting a definite relative humidity to be maintained in a given space. The controls in some cases are by single units, each controlling a group or an entire room-full of heads, or in other systems a control is furnished with each head, shutting it off and on independently of others. In one case the humidifier heads have been so designed that the electric fans can be set to blow in a specific direction, permitting a circulation to set up around the room. Great uniformity of conditions is claimed for this system.

Cleaning Devices

More attention is being given to various devices for cleaning machinery and buildings. Almost every mill has some equipment of this type. Compressed air is often used for blowing accumulated lint off the machinery, and electric sweepers and vacuum cleaners are used for disposing of the lint on the floors. Electric floor-washing machines are part of the equipment of many plants and are regularly used. Electrically operated card strippers are also generally used and, in a number of instances, automatic dustless card stripping systems are installed in the card room, whereby the strips and dust are conveyed by suction straight from the card to the waste room. In some mills the suction method of disposing of waste has been extended to all departments. Pipe lines are run to holes in the floor of each room and at certain times during the day, the waste from any one department is dropped into the conveyor system and delivered at the waste room without further handling.

Materials Handling

More progress has been made in the automatic handling of stock in textile mills, although this type of manufacturing does not lend itself easily to definitely planned conveyor systems. The handling of raw cotton from the opener rooms to the picker rooms is, of course, almost universally done by means of suction fans. This method, as mentioned above, is also being applied to the handling of waste from various departments to the waste room. Distribution systems for feeding uniform stock from a single opener room to a group of several mills can easily be worked out, and it has been shown that a single suction fan, through a properly designed conveyor pipe, can handle stock for a distance of a half a mile without relay fans.

Elevators inside the mills are greatly improved with regard to safety and simplicity of operation. The individual electric drive has been satisfactorily applied to the elevator machinery direct, and the addition of electric control for manipulating the elevators and for applying safety devices on the car and hatchway doors has followed.

Electric storage battery trucks and tractors for handling raw cotton and finished goods between the warehouses and the plant are used where the plant is large enough to warrant it. Various types of trucks can be purchased, including some which will elevate the load directly to storage shelves, or otherwise facilitate the handling and reduce the labor required. Where heavy goods are manufactured, overhead trolley tracks are often used for handling loom beams and finished rolls of goods in the weave rooms.

Hardwood Flooring

Reasons Why Maple Floors Prove Satisfactory for Most Textile Mill Uses—Where They Are Unsuitable

A FLOOR for textile manufacturing operations should have the following qualifications:

(1) It should be durable under the conditions of use.

(2) It should be sanitary, easily kept clean, and should not readily absorb dirt, oil, grease, or liquors.

(3) It should be rigid, yet elastic and resilient.

(4) It should be as noiseless as possible.

(5) It should be dustless.

(6) It should be thermal-proof; that is, it should not easily transmit heat and cold.

(7) It should not cause breakage of truck wheels, or of castings and other machine parts that may be dropped on it.

(8) It should be easily and economically repaired.

We will take up these various points in order:

(1) Maple flooring, including beech and birch, is the most durable of all board floors for general conditions of textile mill use. These woods are the hardest, toughest fibered, and tightest grained of all woods, and will keep smooth the longest. This type of flooring is not suitable or advisable where wet processing is carried on; as in such places the floor is continually wet with acid or alkali liquors, water, bleach and dye liquors, etc. If used for a basement floor, some provision should be made to keep out the ground dampness. An asphalt or tar-concrete sub-floor would accomplish this. For all textile dry floors the hardwood floor is excellent. In a machine shop, perhaps, where heavy trucking is done, or where heavy castings and other machine parts are handled, this type of floor is not as suited to rough usage as is the wood-block type.

Parallel to Traffic

It is advisable to lay the boards, particularly in the traffic lanes, parallel to the traffic. The boards will wear in time and must be replaced. When laid parallel to the traffic, the expense of relaying is kept at a minimum. If the machine alleys are at right angles with the main aisles, the main floor should be laid so as to still keep the boards parallel to traffic in the machine alleys.

(2) Due to the fineness of the grain and the hardness of the fiber, the hardwood floor is very sanitary, and the floor is easily kept clean. This does not mean, however, that every effort possible should not be made to keep oil, grease, and all liquids from contact with it. Absorption and penetration are slow and all wetness is easily wiped up. Floors will in time become oil-soaked, and then the fire hazard is greatly increased. The three woods under consideration are, however, more resistant than others.

(3) A hardwood floor properly laid—that is, with a sufficient sub-floor—is rigid yet elastic. This elastic feature is very important, especially in the cases of girl and women employes who must stand on their feet the greater part of the day. An operative, male or female, is much less fatigued from working on an elastic floor such as hardwood than from working on a nonelastic cement or concrete floor. The effect of a nonelastic floor is quickly felt in the fatigue of the foot and lower leg muscles. Such fatigue decreases efficiency and lowers production. Authorities claim that a loss of working efficiency of 10% can be assigned to this cause.

Noise and Dust

(4) Today we hear everywhere of efforts being made to reduce noise in industrial processes. A hardwood floor is undoubtedly the most noiseless type of floor to be had. Particularly is this so if there is trucking over it. If we are to believe the nerve and mental disease specialists, this noiseless feature should in itself result in increased efficiency and production. Again, a hardwood floor is absolutely odorless, in contrast to some which are impregnated with tarry oils.

(5) A hardwood floor is practically dustless in so far as its own dust is concerned. The abrasion is very slight under the conditions of ordinary wear, and there is no crumbling or disintegrating.

(6) No floor is more thermal-proof than the hardwood floor. It is certainly not as cold as is a cement or concrete floor. This point, so far as it affects the working conditions and the health and comfort of the operative, is on a par with that of elasticity. A cold floor means cold feet, which means lower efficiency and perhaps impaired health.

(7) A hardwood floor does not cause so much breakage of cast iron truck wheels as does a cement or concrete floor. Neither does it cause so much breakage of castings or other machine parts that may be dropped upon it. Edge tools dropping upon it are not injured.

(8) A hardwood floor is easily and economically repaired. Single boards may be removed and replaced with ease and with small expense, and with but little inconvenience to traffic or use. It is the most convenient type of floor on which to fasten machinery. Test data, as given by certain authorities, indicate that hardwood floors rank in efficiency along certain lines as follows:

Alkali resistance	50%
Elasticity	90%
Nonabrasiveness	95%
Resiliency	90%
Thermal insulation	90%

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Textile Application of the Steam Accumulator

Device Stores Heat at Times of Low Demand and Instantly Supplies It to Meet Peak Demands—Increases Production in Processes Utilizing Steam, Reduces Steam and Fuel Consumption, Decreases Heat Losses, Prevents "Shocks," Maintains Constant Pressures, and Increases Product Uniformity

*By R. A. Langworthy**

THE accumulator system of steam storage consists of two main parts: the steam accumulator proper containing the heat-storing hot water under pressure; and the automatic regulating valves which control the accumulator, the boilers, and the entire steam-distributing system.

The accumulator proper is built in the form of a cylindrical steel tank with hemispherical ends, usually installed in the open air without building protection. It is thoroughly heat insulated; and this, combined with its large volume as compared with its exterior surface, reduces the heat loss to a practically negligible amount.

Fig. 1 shows the cross section of an accumulator; and Fig. 2, an exterior view. The tank is constructed of riveted steel plates and is supported by four cast-steel brackets so placed as to distribute the weight properly and also provide for free expansion of the shell under the variations in temperature. One supporting bracket is rigidly fixed while two others rest on rollers, one permitting longitudinal and the other lateral displacement. The fourth is a pendulum support allowing displacement in either direction.

The tank is filled about 90% full of water. In actual operation it is seldom necessary to add or draw off water, a small amount every four to six weeks usually being sufficient.

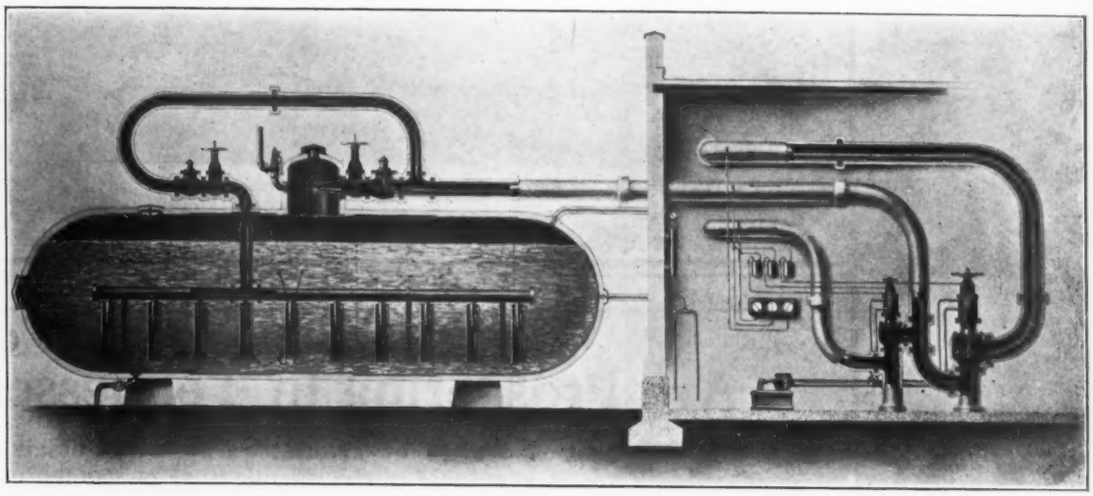

Fig. 1. Sectional View of Steam Accumulator and Controlling Valves

Automatic Operation

After the accumulator is installed, filled with water, and adjusted to the plant conditions, its operation is entirely automatic. It requires no maintenance and a very small amount of operating attention.

Referring to Fig. 1, a non-return valve admits charging steam to the internal distribution pipe and the charging nozzles, which are equipped with circulation pipes to insure uniform and noiseless heating of the water. The discharge of steam takes place through a non-return valve. A De Laval nozzle limits the maximum discharge of steam from the accumulator to an amount which will not allow priming. This also provides for an emergency, such as the rupture of a steam pipe. A water gauge and feed valves are provided for reading and adjusting the water level.

Fig. 3 shows the construction of one of the oil-actuated relay governor valves, which control the entire accumulator system. These valves might be called the "brains" which direct the system and render it not only practicable of application to a large number of industrial operations, but entirely automatic. The valves control the flow of steam in the system to and from the accumulator and to the various consumers, and maintain constant pressures at all points within remarkably close limits.

The valve is actuated by an oil-operated "servo-motor." This servo-motor in turn is controlled by an oil relay, which receives its impulses from the steam pressure or pressures to be controlled. The valve can be adjusted to regulate any steam pressure and keep the pressure constant within one pound. The time required for opening and closing may be regulated between one-fifth of a second and sixty seconds. Further, the valve may be closed instantly by a hand lever and after this may be operated by hand. All moving parts are working in a closed oil system, so that wear and need for attendance are practically negligible.

Textile Mill Application

A typical installation of the accumulator in a textile plant is shown in Fig. 4.

The steam load in such a plant usually consists of several consumers of steam whose demand is fairly uniform, and the dyehouse where the load fluctuates widely. The accumulator is designed to absorb these fluctuations and is therefore connected between the high-pressure main and the dyehouse.

In regular operation the boilers are run at a uniform load equal to the average for the whole plant and at a constant pressure maintained by the governor valve V-1. For that reason the usual steam pressure gauge will no longer serve as a guide for regulating the fires. A master gauge is therefore provided which indicates the amount of steam stored in the accumulator at any moment.

The governor V-1 is controlled by the high pressure (125 lbs.) so that, if the latter tends to rise, V-1 will open, overflowing the excess steam to the accumulator. If, on the other hand, the 125 lbs. pressure falls, V-1

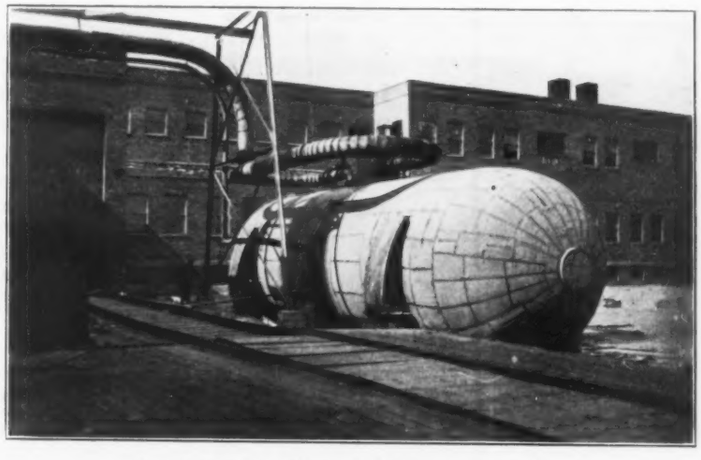

Fig. 2. Exterior View of the Steam Accumulator

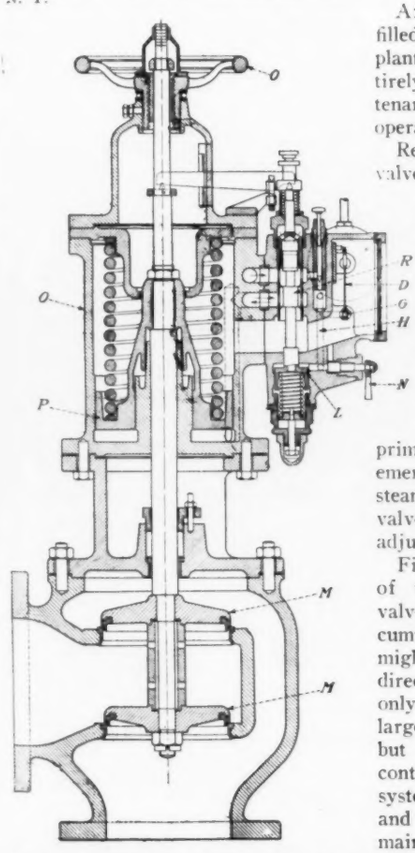

Fig. 3. Construction of a Governor Valve

* Vice-president and general manager, Ruths Accumulator Co., Inc., 292 Madison Ave., N. Y.

BUILD YOUR MILL IN TENNESSEE

TENNESSEE ETP TENNESSEE

Peerless Woolen Mills near Chattanooga, Tenn.

Woolen Mills, Too, Are Prospering In Tennessee

Facts, not theories, prove that Tennessee's industrial assets and advantages are as adaptable to the manufacture of woolen materials as to other branches of the textile industry—that manufacturers of woolens can gain efficient, economic production by utilizing the many resources and favorable conditions of Tennessee.

The Peerless Woolen Mills, American Textile Woolen Company, with three plants, Cumberland Gap Woolen Mills, Hardwick Woolen Mills, Jefferson Woolen Mills, Lebanon Woolen Mills, Murfreesboro Woolen Mills, Springfield Woolen Mills and the Tennessee Woolen Mills, are finding the section's resources and advantages to be ideal.

Plentiful labor, favorable working hours, reasonable taxes, central location, excellent transportation facilities, temperate climate, abundant materials and an adequate supply of low priced power from the great hydro-electric and auxiliary steam power developments of The Tennessee Electric Power Company—these are some of Tennessee's industrial assets.

A complete analysis of Tennessee's advantages in relation to the manufacture of woolens will be prepared for interested manufacturers. Let us tell you with facts and figures why you should "Build Your Mill in Tennessee."

"GO SOUTH TO TENNESSEE" is a booklet of interesting data and authentic facts and figures relative to the industrial situation and opportunities in Tennessee. Free upon request. Specific information as applied to any particular business is also available.

R. C. LEONARD, manager of the Industrial Department of The Tennessee Electric Power Company, will gladly answer any requests for information as to Tennessee's resources, possibilities and industrial opportunities. Personal consultation can be arranged when desired by business executives.

THE TENNESSEE ELECTRIC POWER CO.

CHATTANOOGA ETP TENNESSEE

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BUILD YOUR MILL IN TENNESSEE

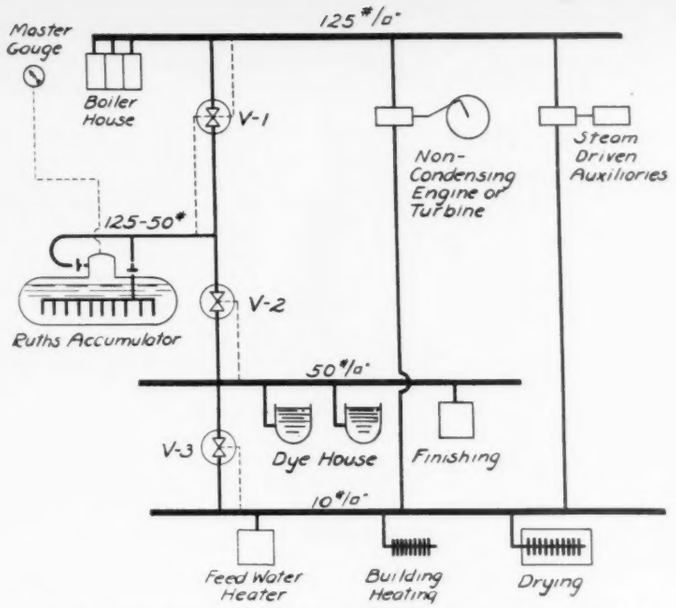


Fig. 4. Ruths Steam Accumulator Applied to a Typical Textile Mill

will close sufficiently to hold back steam and maintain 125 lbs. in the main. Thus any fluctuations in the consumption of 125 lbs. steam are absorbed. A secondary control is also provided for V-1 by which it will

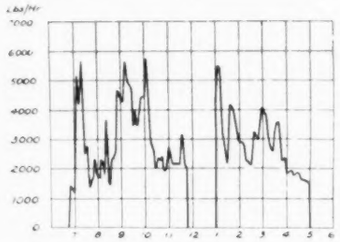


Fig. 5. Steam Consumption in a Dye Plant

open regardless of the high pressure if for any reason the accumulator pressure should fall below a set figure —50 lbs. in this case. This insures at all times the supply of steam to the dyehouse to meet any unusual conditions.

In a similar way governor V-2 is controlled by the low pressure (50 lbs.) and maintains it constant, opening and closing as the demand for steam in the dyehouse rises and falls.

Governor valve V-3 is controlled by the low pressure 10 lbs. exhaust line demand. It opens when the pressure tends to fall and supplies the necessary "make-up" steam.

The difference between the steam supplied by V-1 and that used by V-2 is, of course, stored in or supplied by the accumulator. A reserve is thus built up when the dyehouse load is light to meet instantly the large and sudden demands of the dyehouse when starting up, and this without any effect on the boilers. The rate at which the accumulator may be discharged is limited only by its steam-liberating surface, which is very large, and the resistance of the piping, which is usually the controlling factor.

Steam Demand

It will thus be seen that the system, consisting of the accumulator and the three governor valves, not only supplies all of the peak demands of the mill, but automatically maintains the three working pressures at a constant figure.

In figures 5, 6, and 7 are shown typical curves of the steam demand in a textile mill. They strikingly illustrate the extreme and rapid variations in load which the boiler plant is called upon to satisfy. Since the ideal boiler plant load is a straight line, obviously the operation which meets the load conditions of these curves is, from the

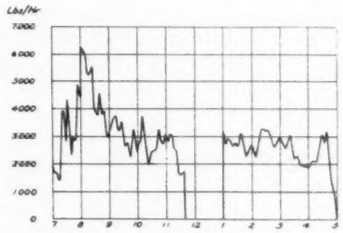


Fig. 6. Steam Consumption in a Weaving and Dyeing Mill

boiler-plant standpoint, most unsatisfactory and inefficient.

The efforts of the firemen to meet the peaks and when they suddenly disappear to keep the safety valves from continually blowing off, lead to variations in steam pressure which are serious, both from the power production and manufacturing point of view.

Another point should be emphasized with reference to the steam load curves shown in Figs. 5, 6, and 7. While they all show high peaks, they represent not the demand of the industrial process, but the ability of the boiler plant to furnish steam. Without question the process would have been better served had more steam been available to meet its instant demand. The boiler plant, however, was unable to furnish an adequate supply of steam quickly, and the process work suffered thereby. This is true in many other industrial fields as well as the textile.

Effect of Accumulator

The curves in Fig. 8 are a typical example of the actual effect of an accumulator installation on plant operating conditions. They are taken from the dyehouse of a textile plant. The upper two curves show the actual steam demand of the dyehouse; which varies between 4,400 lbs. and 33,000 lbs. of steam per hour, and the actual load on the boiler plant after the accumulator was installed. The lower curves show the variations in steam pressure before and after the installation of an accumulator. The

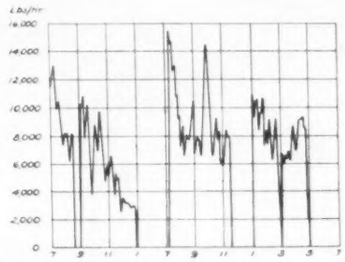


Fig. 7. Steam Consumption in a Textile Printing Mill

improvement in operating conditions, both in the boiler plant and dyehouse, needs little comment. It might be noted that the maximum boiler load, after the installation of the accumulator, is about 15,500 lbs., or about 50% of that previously required, and that, instead of variations in pressure from 43 lbs. to 115 lbs., the pressure is held absolutely constant at 100 lbs.

The speed of production often depends upon the heat-supply available, as, for instance in the drying of cloth in dryers, which could also be done in the open air without the application of any heat. The necessity of drying in the shortest possible time and in a minimum of space requires a forced supply of heat at a high temperature.

Also with some chemical processes, such as dyeing, which require a high temperature to be carried through quickly, it is not only necessary to raise the temperature of the product to the desired degree, but also the temperature of the dye liquid, which is 20 to 40 times larger. The time required to heat the water to a certain temperature has no influence on the dyeing process itself, but has a decided bearing on the plant output and consequently upon the profits.

Increased Production

It is an easy matter in any dyehouse to obtain a record of the temperatures of the dye vats by frequent readings. The curves in Fig. 9 are plotted from actual readings taken in this manner. The shape of the curves depends upon the size and arrangement of the piping and on the size of the valve in the steam line leading to the vat. The curves show an average time required to heat the vats of 1½ hrs., although some of the vats, including the largest, can be heated in ½ hr. However, in this plant it would be impossible to heat all of the vats in ½ hr. due to the limitations imposed by the boiler plant capacity. In other words the boiler

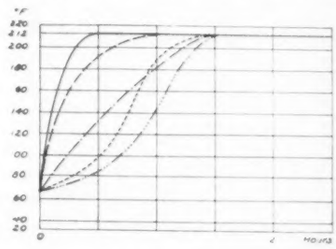


Fig. 9. Time-Temperature Diagram for Several Dye Vats

plant is the "neck of the bottle" in the factory output. It is incapable of supplying promptly the heat required to insure maximum output. It is a well-known fact to textile engineers that the heating time is lengthened in many plants by deliberately install-

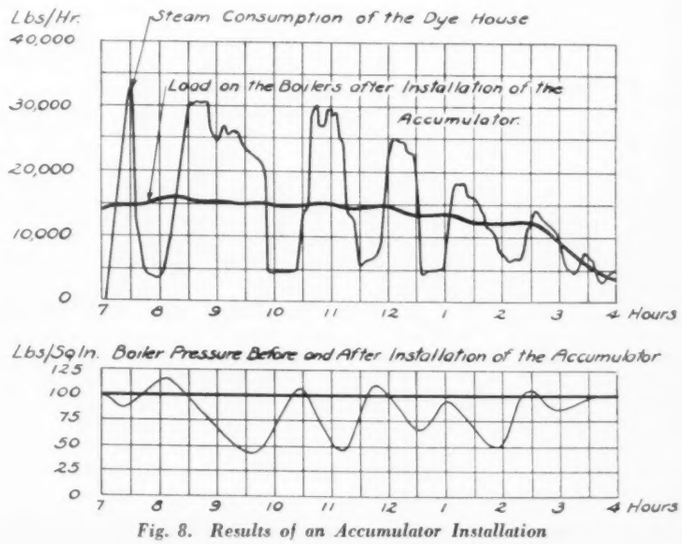


Fig. 8. Results of an Accumulator Installation

Industry Prospers in GEORGIA

They are Assets *in* GEORGIA

IN Georgia you can pay dividends from *savings* in production costs. You will find raw materials close at hand. You will find efficient, intelligent and adaptable Anglo-Saxon labor. A plentiful supply of hydro-electric power at low cost. Rapid transportation because of adequate railroad and port facilities.

The low taxes are particularly attractive to manufacturers. Georgia has no state income tax, no state inheritance tax. Counties have the right to exempt industry from taxes for five years.

Your savings in overhead and manufacturing costs will enable you to compete profitably in all parts of the country, but the prosperous Southern market whose buying power has trebled in the last ten years will absorb a great portion of your output.

Excellent sites are available and building costs are much lower than in other sections. Georgia's progressive communities extend a warm welcome to industry.

Investigate Georgia. Find out what these outstanding advantages mean in dollars and cents to you.

* * *

We will gladly place our engineers at your disposal in order that you may determine the profit opportunities as they apply to your business. Georgia Power Company, Atlanta, Ga. New York office: 120 Broadway.

GEORGIA

POWER COMPANY

- - - INDUSTRY PROSPERS IN GEORGIA - - -

ing to the dye vats, to prevent overing to the dyevats, to prevent overloading the boiler plant. Factory output has been artificially reduced by this means, and output means profit. The profit, therefore, is limited in this case, not by the manufacturing equipment, but by the boiler plant.

Such a condition is radically changed by the installation of a steam accumulator. It supplies instantly all the steam the process requires, maintains all steam pressures constant, and forms an elastic connection between the boiler plant and the load, making each independent of the other. Under such conditions it is possible to design the pipe lines with reference only to the needs of the process, decreasing the heating time and increasing production.

In addition to the increased production mentioned above, an important

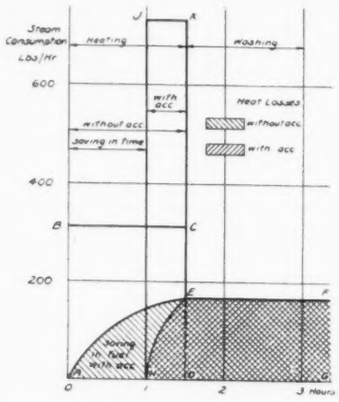


Fig. 10. Fuel Saving in Heating Dye Vats With Accumulator Installed

saving in steam is effected. The present methods of dyeing require the cloth to be run in the open air, causing serious heat losses, as evidenced by the clouds of vapor. These losses in an hour are often as high as the total quantity of steam required to bring the dyevat to the desired temperature. It is impossible to reduce them, as the dyeing process requires a certain time. Fig. 10 shows that also during the heating-up of the dye vats large heat losses occur, increasing with the temperature of the liquid. Speeding up the heating reduces the time the cloth is exposed to cool off. The area AEH represents the reduction in heat losses accomplished by reducing the heating-up time from 1½ hrs. to ½ hr., which will save up to 20% of the quantity of steam required.

Besides these interesting direct advantages in the dyehouse, the installation of the Ruths Accumulator prevents the well-known "shocks" in the finishing and drying apparatus. These shocks result from the reversal of steam flow to the machines due to the drop in pressure when all the steam is consumed by the dyehouse. When the pressure varies, the heat transmission in the machines varies also, with a consequent uneven temperature applied to the product. This can lead to too drastic drying, resulting in destruction of the cloth, or to insufficient drying and incomplete carbonization. With the accumulator installed, the steam pressures are automatically maintained at a constant figure and uniformity of product is assured, as well as reduced steam consumption.

In a technical sense the accumulator acts as a huge flywheel in the steam system, absorbing all fluctuations. It can be built in any size to meet specific conditions. It has already been built in sizes of from 60 cu. ft. to handle 220-lbs. of steam to 35,000 cu. ft. to handle 150,000 lbs. of steam.

Maintenance of Fire Pumps

Care Required by Various Types of Pump—Divided and Unappreciated Responsibilities Are Causes of Neglect

By Ezra E. Clark

WHEN we spend our money for a machine to manufacture goods, we intend to keep it in perfect order, so that its full output may be always realized.

But, being human, we are liable to permit a machine not in daily use to lose its best efficiency, even neglecting at times to make slight but needed repairs. When that machine happens to be the fire pump, which produces no goods and is seldom called upon for real service, then it is that the best of intentions sometimes fall down and the pump is found out of order at the time of the inspector's visit, or in the emergency of a fire.

Someone should have the responsibility of keeping a plant's fire-protection appliances in order. Divided responsibility is dangerous. When one department takes care of all the motors and another department takes care of all the pumps, then the motor-driven fire pump is subject to a divided responsibility. Recently this resulted in a melted-out pump bearing.

The most important feature to be cared for in a fire-pump equipment is the water supply. Is it adequate? Are the screens protecting the intake free of obstructions, and do they completely protect the intake? The best pumping equipment in the world may be put out of commission by some fault or neglect at the intake end.

Next is the source of power. Is this adequate? Is there ample steam, feed-water, water power, electric current, or gasoline, for the respective pumps under consideration?

Steam Pumps

The maintenance of a reciprocating steam fire pump does not require a high degree of skill, unless an overhauling is needed. One should become familiar with its design and learn how to get at every part. The writer has seen master mechanics surprised to find rubber valves in the "head end" as well as the "yoke end" of water cylinders. Valves and springs should be examined periodically, and a few removed for critical observation. Leaky valves will cut down the discharge and sometimes delay the priming of the pump. Keep spare valves and springs on hand, and replace promptly any defective ones.

The plungers and bushings may need refitting. Unless this wear exceeds 1/16 in. in diameter, the resulting slip may be offset by a slight increase in speed. A considerable lift, however, may necessitate refitting before reaching this amount of wear.

The lubrication of the working parts must not be overlooked. Adjust the stuffing-boxes, to secure substantially equal friction load between the two sides of the pump. Whatever rod packing may be adopted, it should never be forced in tight, but left sufficiently loose to permit a slight escape of steam or water. When operating pump, open proper vents to get rid of all air, except a few gallons in top of air chamber. This will aid materially in preventing vibrations in piping.

Another type of pumping unit driven by steam is the turbine-driven centrifugal pump. The care of the bearings is as essential for the turbine as the pump, the maintenance of which is discussed under the heading of centrifugal pumps.

Rotary Pumps

Rotary pumps are simple to care for, because of fewer parts. Periodic attention is needed, however, to their stuffing-boxes to prevent leakage, and to their bearings to secure adequate lubrication. Neglect of these features will often result in a rusted shaft or an overheated bearing. It is the hot bearing that shuts down the pump. If driven through friction gears from a water wheel, the gears should be kept in alignment, and their surfaces maintained free of oil or grease. A protecting hood helps to keep them clear. The friction clutch drive is good only when its shoes are kept properly adjusted, and not allowed to wear out. This maintenance of the driving connection is of first importance.

Rotary pumps driven from a gasoline engine are common in fire-engine equipment, but rarely as mill fire pumps, as the cost would be excessive —compared to the centrifugal—even when driven direct. The rotary, however, would have the advantage of self-priming for ordinary lifts.

Centrifugal Pumps

With centrifugal pumps, generally driven by electric motors, first attention must be given to stuffing-boxes and lubrication of pump and motor bearings. For absolute reliability, centrifugal pumps should take water under a head. Where this is not possible, very reliable priming arrangements must be provided. These may consist of a foot valve and priming tank, with preferably a second means of priming, such as a vacuum pump or exhauster, to exhaust the air from the suction pipe and casing, and thus completely fill the suction pipe and pump with water. The exhauster should be driven from the same source of power that drives the pump.

It should be the invariable rule to first prime the suction pipe and pump casing with water before starting the pump. Otherwise the wearing rings between impeller and casing are liable to seize or abrade and prevent the operation of the pump. This has actually occurred in several instances. This type of pump even more than other types demands that its water supply be screened, as it gives no indication of a choked impeller until a considerable flow of water is demanded. A small obstruction in the impeller cuts down the discharge.

Electric motors should be carefully guarded against water splashing from pump. A non-combustible shield erected between the motor and the pump will protect against this.

The gasoline-engine-driven centrifugal fire pump, where skilled attendance is assured, can give excellent service. Here again does the character of maintenance determine whether equipment will be reliable.

Causes of Neglect

There is no fundamental difference between a gasoline-engine-driven pump and a fire-department gasoline pumper. But the latter receives a high order of care and maintenance. It is not allowed to run down. It is kept tuned up to the highest pitch of performance by constant supervision. It *must* operate when called upon any minute of the day or night, and frequent tryouts are made.

With a mill fire pump, however, this high order of maintenance is more difficult to secure, for the care of the mill fire pump is not the sole business of the man in charge. He has other duties, and the importance of the fire pump may not have been stressed upon him. At one mill the mechanic in charge overlooked the cooling water for the cylinder jackets, and the cylinders overheated and were badly scored. A mechanic at another plant borrowed the distributor from the engine to try out on his automobile, thus crippling the fire-pump service. At still another plant, the man in charge was not sufficiently skilled to know when the storage battery was run down. Too often men are assigned to the care of such pumps who are either not sufficiently trained or who are lacking in that enthusiasm and sense of responsibility that makes the gasoline pumper the dependable machine it is today.

This type of pumping equipment when installed in a mill should also be frequently operated, and kept tuned up, to give assurance that the numerous devices about the engine are in working order. Unless proper supervision can be secured, it is better, when other power is available, to adopt one of the simpler types of pumping unit, of rugged construction, that will stand abuse, and function in the hands of an unskilled man.

The periodic testing of any fire pump, at least yearly, at full capacity is of great value in the maintenance of the equipment. In no other way can assurance be given that the fire pump is in good condition and ready for service at any time.—*Factory Mutual Record.*

Are all the churches in your town and in your state trying to assist you as a manufacturer?

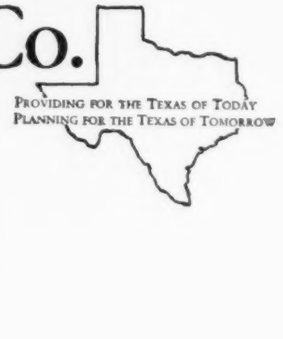
IN SOME sections of the country, public opinion so far as manufacturing is concerned is adverse.

Even the best people forget that it is the manufacturers who furnish employment to thousands of operatives and pay out hundreds of thousands of dollars in wages, and that these wages make it possible for the local merchants to do business, pay the taxes, carry on the schools, support the churches, etc.; and in these older sections of the country where the mills have been established for so many years, many men who ought to be leaders in creating favorable public opinion are actually working to the adverse interests of the mills.

There is none of that in Texas. Everybody in this great state wants industry. The state is fast becoming one of the greatest manufacturing and merchandising districts in the country.

Texas Power & Light Co.

General Offices, Interurban Building
Dallas, Texas



17-27

Evolution of Shipping Container

How Shipping Room Profits Have Been Increased by Development of Lighter Containers of Equal Strength

*By H. W. Hawk**

ONE of the earliest discoveries in the science of box design was that the strength of a box, measured in its ability to withstand the shocks of transit without damage to its contents, has little to do with the thickness of the lumber used in its construction. The strength of a box was found to be almost wholly a matter of design.

Correct nailing and the addition of battens on the ends, always the weakest parts of a shipping container, permitted considerable reduction in the thickness of the lumber used. Then the addition of metal straps, tacked around the ends, and later the addition of wire ties, made it possible to reduce still further the thickness of the lumber used, at no sacrifice of strength—strength, that is, in terms of protection to contents.

Obviously, here was great economy. As the thickness of lumber used in boxes was steadily reduced, the weight of those boxes was also steadily diminished. Next to the original cost of a box, the item of freight or express charges on the box is the biggest factor in its total cost.

Assuming the average transportation cost in the country to be one dollar for a hundred pounds, every pound saved in box weight meant a cent saved. Simply through the reduction of weight made possible by the application of metal straps and wire ties, plus the reinforcement afforded by battened or cleated ends, it was often possible to reduce the weight of a particular container as much as 10 or 15%—three to seven pounds on a single box. This meant an actual saving of three to seven cents on each package shipped.

When one considers the millions of packages that probably enjoyed a saving as large or larger than this, one realizes that box design, applied in a practical way, produces profits in the form of savings.

We call this matter of box design an evolution. One of its highest developments has been, of course, the fiberboard and corrugated paper shipping container which, in its field, has grown to great proportions. The weight and the first cost in this class of shipping package, through the application of scientific design, are fast being reduced to what, in the package field, is an irreducible minimum.

For certain products, the fiber and corrugated boxes are ideal; and the manufacturers of these packages have been aggressive and quick to take advantage of the fact that the American shipper of merchandise is now actively searching for profits wherever they may be found. If, by substituting a fiberboard or corrugated box for something heavier and more costly at no sacrifice of customer satisfaction, the manufacturer has been able to find a substantial cash saving in his shipping department, he has quite naturally reasoned that this saving belonged in the column of his profits.

Wire Bound

Another class of container, which is more directly in line with the evolution of the wooden box, is the so-called wirebound or self-strapped thin lumber wooden box or crate. After all is said, this type of container is the result of perfectly natural and wholly expected discoveries.

It was a comparatively short and easy step from the thin lumber, nailed box, reinforced by metal straps or wire after the box had been assembled and packed, to the wirebound box or crate that is delivered in the flat already two-thirds assembled with its wire-strapping already stapled in place.

The specifications for the wirebound type of container may be easily varied to suit the product carried. Thus, if light-weight goods are to be packed, very thin lumber is used, and the number of wire straps is reduced and a small gauge used. If the product is heavy, on the other hand, thicker lumber and more and heavier gauged wires are used. In every instance effort is made, on the part of the designer, to produce the box or crate that will, with the minimum amount of lumber, deliver the product to its destination undamaged and without loss.

*Of General Box Co., Winchendon, Mass. Abstracted from article in *Industry*.

Industrial-House Design and Cost

Must Consider Probable Depreciation and Upkeep—Advantages of Standardized Design Throughout the Mill Village

*By C. R. MacDonald**

OPERATIVES' houses, with the various village equipment, such as sewage, water, lights, and street improvements, of the average modern industrial plant will absorb from 20 to 25% of the invested capital. This impressive proportion of a plant's investment is tied up permanently in a highly important item and one that demands careful consideration, because, from a standpoint of direct, calculable revenue, every dollar is not only inactive but presents from the start a serious problem of depreciation; this, in turn, calling for a further outlay of apparently unproductive capital in the form of maintenance.

Topography of Site

The first, and one of the most important, considerations governing industrial village and house design will be found in the topography of the site. This factor is receiving increased thought from owners when considering sites for new plants. A rolling or undulating village site offers the greatest aesthetic possibilities, permitting the running of street lines on natural contours, thus attaining an attractive curvature and avoiding expensive and unsightly heights in house foundations. This point is interesting when it is considered that an additional foot of foundation height in the average five-room house with curtain walls costs approximately $70; a premium of $14,000 or more on a village site of excessively irregular topography.

A further objection to this condition is that excessively high foundations are almost sure to be used as chicken or cow shelters, or at least a catch-all for rubbish, forming a serious hygienic and fire hazard.

The house design demands greater study and ingenuity of plan than a more pretentious building, for the reason that every detail and cost item must be multiplied by the number of houses to be built. What would probably be an insignificant matter in the erection of one house, involving a small additional cost, will mount to an impressive figure when applied to two or three hundred houses, and justifies extremely careful study. For example a 2 ft. 10 in. x 6 ft. 10 in. stock door, trimmed, finished and installed, costs approximately $8.50; it is frequently possible, by careful planning, to eliminate one and sometimes two doors in the average house. In a village of 200 houses, this small detail represents the cost of one additional house.

Depreciation and Upkeep

Other important economic points to be considered in industrial-house design are depreciation and upkeep. In the nature of things, these costs grow in importance in the course of time. As the village costs are so remotely connected with actual production costs, it is correspondingly difficult for a directorate to spend money on non-productive upkeep accounts. Hence, the adoption of the fewest possible types of plans and the most careful study of them is essential.

An ideal scheme would call for one floor plan for each size house, with two types of porch treatment for each. Added to these structural variations (which should be kept of equal cost), three or four color combinations of painting and two patterns of roofing material, it is possible to build a village of 200 houses in which not more than four will be exact duplicates in appearance and yet every one will be the same in plan, thus standardizing maintenance and repair to the greatest degree by using duplicate or interchangeable repair and replacements, such as glass size, paint color, hardware, screens, etc.

The industrial house must of necessity be what is known as "cheap construction." Putting this "cheap construction" together in such a way that it will resist deterioration, and using judiciously better or more wear-resisting materials where usage is hardest, will call for more study than the average design problem. We are always confronted with the fact that the additional cost per room, or house, must be multiplied by the number of rooms or houses, which in turn must be compared to upkeep or replacement costs in relation to the interest on the added investment.

Cost of Various Types

In general, projects of the type under discussion will fall into three classes—one in which the owner, through lack of working capital or a policy of false first-cost economy, will require the cheapest construction and few, if any, refinements of equipment, such as plumbing, screening, non-combustible roofs, etc. Houses of this type, using meager framing sizes and spacing, ceiled walls, single floors, and altogether lacking in desirable living features, can be built for $250 to $275 per room. Their construction is being abandoned by owners and discouraged by engineers for obvious reasons.

The second type of industrial house, the one which strikes the general average and which is subject to the widest variation in cost, can be built at a unit price per room of approximately $325. This figure represents the basic construction, using standard framing lumber properly spaced, double floors, sheathed walls and roof, and plastered interiors, and will enable the owner to add such improvements from time to time as conditions warrant, without the feeling that he is throwing good money after bad.

This house should be built with complete bathroom and kitchen plumbing, a flexible type shingle roof, brick curtain walls, B X cable wiring, and a somewhat better grade of interior finish and flooring, for $425 to $450. This would bring it up to a first-class standard of construction and finish, requiring the lowest maintenance outlay, and furnishing the operative a completely equipped, well-designed home. It would permit a wide latitude in exterior treatment.

The third and costliest type of village house is an elaboration of the second type into one with brick veneer exteriors, using either selected common brick or a varied selection of the cheaper grades of face brick, with asbestos shingle roofs, copper flashing and guttering, full flights of brick or concrete outside steps, and other refinements of detail and construction that make it comparable to the average modest city bungalow, with correspondingly lower upkeep charges.

Houses of this type will average $700 per room and are justifiable only where an owner's investment capital is abundant and the nature of his product will require the attraction and retention of the highest type of labor. The excessive cost will, in some instances, also have a very real advertising value.

*With J. E. Sirrine & Co., Engineers, Greenville, S. C. Abstract of paper read before Construction Division of American Society of Civil Engineers at spring meeting in Asheville, N. C.

No need to gamble

Today, textile industries established in large or congested centers are facing the problem of seeking more desirable locations. When considering a change—WHY take a chance?

Why not locate in "Proven territory" in the Carolinas where, as every mill man knows, conditions have resulted in quality goods being produced and sold at minimum prices.

Why not keep this fact before you and consider establishing your new plant in one of the numerous small towns or cities in these States away from industrial congestion where labor is content and where other conditions have proven favorable to low cost production.

Carolina Power & Light Company

INDUSTRIAL BUREAU RALEIGH, NORTH CAROLINA

CAROLINA POWER & LIGHT COMPANY
LIGHT HEAT POWER

No Cap, Flyer, Ring, Nor Mule

Ingenious Inventor Finds All Unnecessary for Spinning Yarn—Never Was a Frame Like It

By Cal Ender

EVERY once in a while we hear of a new machine that is destined to revolutionize the textile industry. Generally it is a new loom. Sometimes it is a flax retting process. Frequently it is a combination of processes. This time it was a new spinning frame.

The telephone on my desk rang furiously. As usual it took me some time to disentangle my feet from the upper drawer, pull the meerschaum out of my mouth, and excuse myself to the gentleman who was telling me stories. The call was from a town in Massachusetts.

"Is this Mr. Ender?" somebody asked.

"Uh-huh," I said.

"I've invented something new," said the voice, "—sort of a ring spinning frame without any ring."

"Good. Anything like a cap spinning frame without any cap?"

"Just exactly," the party replied. "Now I want your opinion on it. Can you come up?"

Wearily I took my brief case from its shelf, where it seldom gets dusty, and left for the great steamboat that runs up the Housatonic River. This accounts for how I happened to be enjoying the hospitality of one Joseph Schwamb on an evening this spring.

Probable Results

Joe had been working hard (with his brain, a pencil, and some paper) to perfect a brand new type of spinning frame. The big idea he had in mind was to eliminate all limitations on the size of the yarn package. He has been connected all his life with the cotton industry and therefore knows little about cap and flyer spinning, and he has only a limited knowledge of the mule. It was the ring spinning frame in which he discovered the fundamental defect he has started out to eliminate.

"Now," said Joe, "in spinning, all you have to do after the roving leaves the drafting rollers is to twist it and wind it on a bobbin. Why go to all the nuisance of running it out to one side, threading it through a traveler, and then letting it drag around and balloon and waste a lot of motion? Don't you know that the revolutions of the spindle in excess of the revolutions of the traveler are all wasted? Twist is only put in by the revolutions of the traveler."

"Yes," I said, "but how about winding-on?"

"Let that be done by the same revolutions that twist the yarn, or else split the work into two separate motions. Why add additional revolutions to the spindle for winding-on and then race the spindle at breakneck speed to cover both requirements? Split this into two motions; and then, if we care to run these two individual motions at the same speed that the combination was formerly run at, we shall obtain a much higher production."

"Higher production is certainly good selling talk," I said.

Eliminates Doffing

"Now, in addition to this higher production obtained by thus reducing the work of the spindle," continued Joe, "I propose also to save stoppage by reducing the number of doffings. In fact, I think eventually I can eliminate doffing altogether."

"Perhaps you can run the threads directly from the spinning frame to the twister—or even wind them on the loom beam," I suggested.

"Not improbable at all," he retorted. "I may put one of my spinning attachments on every knitting machine and eliminate the spinning frame altogether."

"Well, what else does your invention accomplish?" I asked.

"It eliminates all ballooning."

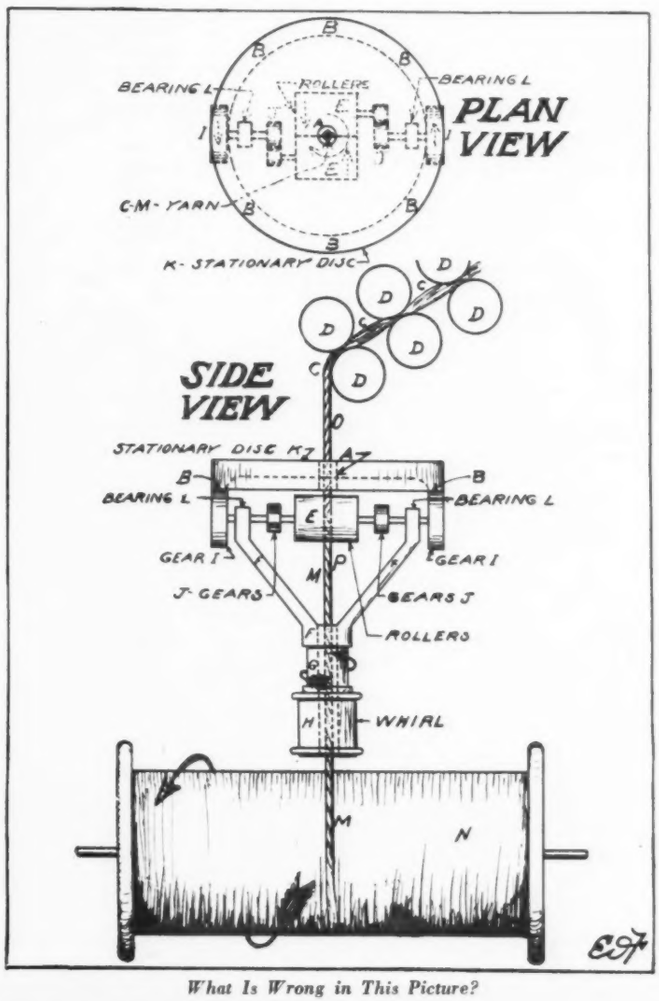
Joe watched my expression intently. I laughed—editors have to be careful not to encourage possible publicity hounds, you know—and told him I thought it sounded good but I had seen too many revolutionizing textile machines to swallow this one on the mere statement of an inventor.

Thereupon Joe opened a drawer in his desk and pulled out a large diagram. This he laid on the table, and we both sprawled over the edge of it. I reproduce it herewith, as accurately as I can recall it.

Principle of Invention

The diagram is in two parts. The upper part represents a view looking down on the essential elements of the device. The lower part is a view from the side, showing the entire mechanism and also the drafting rollers and the yarn package. The principle of the thing can be obtained from a study of the plan view only, and then, if the reader doubts the practicability of the proposition, he may study the remainder of the diagram.

The principle is astonishingly simple. Take a look at the two rollers shown in the center of the plan view (upper diagram). Suppose that these are located about where the tip of the spindle is located on the present spinning frame. Assume that they are revolving toward each other as indicated by the arrows, and that at the same time they are rotating horizontally in a clockwise direction, as shown by the circular arrow. Now simply feed the roving, which is issuing in the orthodox manner from the drafting rollers (not shown in the plan diagram), to the central spot labeled "yarn" in the diagram. You will see that the revolutions of the rollers will draw the roving between them and that the horizontal rotation will put twist in the roving, thereby converting it into yarn. What could be more simple? The yarn having been thus spun without any winding-on, it can now be conducted to a winding-on mechanism of any capacity and located anywhere within ten or twenty miles of the spinning frame.



What Is Wrong in This Picture?

Actuating Mechanism

The remainder of the diagram shows how the action of the two rollers can be made mechanically possible. The mechanism consists of two main parts. One is stationary; the other, revolving. Consult both diagrams now. The stationary part is a disc with a small hole *A* in the center for guiding the yarn, and a ring of gear teeth *B* on the underside close to the outer edge.

The roving *C* leaves the drafting rollers *D* and passes down through the hole *A*. It then meets the rollers *E*. Rollers *E* are supported in the revolving piece *F* which turns in a stationary bearing located at about *G*. This piece *F* is revolved by a band around the whirl *H* which receives its power from the revolving drum (not shown), as customary on all spinning frames. Rollers *E* receive their power from gears *I* through gearing *J*. Gears *I* mesh into the teeth *B* on the stationary disc *K* and receive their motion from the revolutions of the piece *F*. The gearing is supported in a number of bearings which are crudely and only partially represented by bearings *L*. The yarn *M*, after leaving the rollers *E* passes down through a central bore in the piece *F*, and may then, according to Mr. Schwamb's theory, be wound up anywhere; in the diagram it is represented as being wound on a large spool *N* which is driven independently from the spinning mechanism and is moved alternately left and right to obtain a traverse.

One Disadvantage

All very pretty, but here is the fallacy it was necessary to point out to Mr. Schwamb. For every turn of right twist put in at *O* a turn of left twist is put in at *P*, and therefore each turn made in the roving before it reaches the rollers *E* is taken out after it leaves them.

For a while Schwamb argued that he could revolve the package *N*, but I insisted this would take up too much floor space. Then he offered to set the package up on end and feed it from a guide on the side.

"If you're going to do that," I said, "why not adopt the ring and traveler and be done with it?"

"By Gosh," he bellowed, "I'm right back where I started from."

That is just where he was.

(This article is published with the good-natured consent of Joseph Schwamb.)

You have GRANDFATHER'S CHANCE

WHO has not wished for his grandfather's chance to establish a business, to invest in young and vigorous enterprise, to buy real estate *sure* to multiply its value year after year?

You have that chance . . . . the opportunity to move your business here, and to make your investments grow into a solid fortune. But grandfather's risk has been cut 'way down.

For *he* had to pioneer. He gambled on what *might* happen in developing industries, enlarged markets, multiplying values. For you, the risks are discounted. The hard pioneering work has already been done.

State-wide road building has opened up whole sections of Piedmont Carolinas where previously the only work available was on backwoods farms. A great public service group has carried hydro-electric development into these sections, providing *industrial* employment for the abundant farm labor.

Business men have grasped the opportunities. Wealth during the last few years has increased *three times as fast* as in many older, more highly industrialized states. Now is the time to build with this section. Take advantage of the opportunities to set up *your* business in Piedmont Carolinas, to supply the industries already established here. Serve the rich markets that have been developed and that are growing far faster than they can at present be supplied locally.

Investigate. Get all the details that apply to you and *your* interests. *Our Industrial Department, Room* 1003, *Mercantile Building, Charlotte, N. C., gladly places its facilities at your service. Write.*

Triple Profits
Through Reduced Costs

A knitter and manufacturer of women's underwear,* in his determination to avoid continued and well-nigh continuous labor troubles, engaged a nationally known firm of engineers to make an industrial survey of his plant and of a location in Piedmont Carolinas.

Every factor was carefully weighed and considered—raw materials, labor, power, freight, rent, taxes, maintenance and so on.

This plant is now being moved. Its owner could not escape the cold logic of the figures laid before him by his engineers—costs so reduced all along the line that *conservatively* net profits should be *three times* what they are now.

**Name and all details on request.*

Rich Markets

Some idea of the potentialities of nearby markets may be gained from these facts:

Annually Southern textile mills purchase $107,000,000 worth of equipment, machinery and supplies. Only a small part of this demand is supplied by Southern manufacturers.

Practically all of the textiles used in the extensive furniture industry, together with most of the rugs and carpets sold in this section, are imported.

Makers of plush, damask, fine goods, fancies, silks and rayons, find in the Carolinas (where 64% of all Southern spindleage is located) a steady supply of skilled textile workmen. Manufacturers of coarser goods in turn draw on the great farm reservoir of native labor—a reserve three times as large as the number now employed in industry.

These are only a few of many outstanding examples of rich waiting markets. They will amply reward manufacturers who elect to utilize local labor and local raw materials in supplying them.

PIEDMONT CAROLINAS
Where Wealth Awaits You

DUKE POWER COMPANY

{OWNERS OF SOUTHERN POWER COMPANY, SOUTHERN PUBLIC UTILITIES COMPANY & ALLIED INTERESTS}

The Origin of Tweeds

Plain Fabrics Unsalable in 1830, so Manufacturers Turned to Fancy Woolen Fabrics—Hand-Spun and Hand-Woven Shepherd's Check One of First Fancy Cloths—Later More Somber Cloths Called "Tweels" Were in Demand—"Tweel," Through Error, Became "Tweed"

By J. A. Hunter

LITTLE does the average man dressed in his sport clothes of the latest fabric design realize that he is wearing a type of cloth which was in favor nearly four hundred years ago. Yet the woolen fabric now known as "tweed" is an outgrowth of the old checked kersies of which the ancient Britains were so fond. Shepherd's cloth, a two-and-two twill in a black and white check, was long a favorite with sportsmen, but the demand for this fabric for general wear was not great. Quieter styles were called for, and the simple brown-and-drab twill was offered. How this term became "tweed" is explained in the accompanying article, which also tells the history of the word to the present day when "tweed" is used to designate a multitude of fancy woolen fabrics.

THE effective beginning of fancy woolen manufacture in Great Britain dates from around 1830. In the early years of that decade, fancy woolens received the sanction of fashion as suitable for wear by self-respecting men, and then modern interest in the article began. Fancy woolen cloths, combed or carded, had probably been made 2,000 years earlier, for the Roman invaders found the South Britains wearing checkered cloth. The hand industry was producing wool goods long before the establishment of mills; goods were woven—as a monastic chronicler reported at about 705—"with shuttles not filled with purple only, but with various colors." The possibility that these goods were worsted has to be admitted, but there is a clear reference to checked kersies in a statute of 1551, and about these woolens there is no room for mistake.

It was in 1830, according to a district historian, that the first piece of fancy woolen fabric was woven in the Holme Valley (Huddersfield), the twin of the Colne Valley which now supplies so large a proportion of the cheaper English tweeds. The same year saw the first fancy piece made in a mill in Stroud, the center of the fine woolen industry of the western part of England, and a source of plain goods for many hundred years. At the same approximate date, developments were stirring in the southern part of Scotland, and Scottish woolen mills had the good fortune to become identified especially with the new styles of suiting fabrics.

Not Enough Plain Work

The business began for almost the only reason that fancy manufacture has ever been known to begin in Great Britain—the mills could not find enough work in plains. Blacks, blues, browns, to which can be added greens, grays, and other plain cloths, were unsalable and the markets were languishing for want of something new. When the rush came for fancy woolens it was signalized by a flying to extremes.

Woolens, plain and fancy, had been hand-spun and hand-woven in southern Scotland from time immemorial. Blackfaced mountain and improved sheep furnished raw material, housewives spun at the wheel, and, in what are now the mill towns, men who made a trade of hand-weaving converted yarns into cloth. One article was especially typical of the neighborhood long before the advent of machinery. In all the border countries of England and Scotland, shepherds wore coarse-spun shawl plaids, or "mauds," to use their local name. Their pattern— two and two twill, six ends black and six white in the warp and filling—is well known as the shepherd's check, with squares of solid black and solid white and a twill of white and black intervening. A cut 3 or 4 yds. long from the household roll, sufficient to make a warm plaid, was every herd-boy's birthright on going out to his first service. Black and white was the shepherd's uniform, much as black and white shawls are still the uniform of the gypsy women of rural England.

The strong pattern of the shepherd's check took certain great men's fancy. Lord Brougham, the Marquis of Lothian, and, it is alleged, the great Sir Walter Scott chose shepherd's check for trouserings, attracted either by the design or by the reputation of the cloth for wear and waterproofness. The choice was an eccentricity in times when all men's clothes were plain.

Machinery Introduced

Carding and spinning machines were introduced into Galashiels, the chief of the Scottish manufacturing towns, about 1790. Besides blackfaced wool, there was an increasing supply of the then new breed of Cheviot sheep; Saxony merino wool was imported from the Continent and used in Scotland; and merino was forthcoming from Van Diemen's Land, as New Zealand was still called. Manufacturers thus had the means of putting out finer and better qualities of fancy cloth than could possibly be hand-spun from country wool. Among the patterns was the mill version of the shepherd's check, and this swung suddenly into fashionable use.

"In 1832 or 1834, a fashion without precedent in Scottish manufacturing history set in for the article," says James Locke, cloth merchant, in his book of reminiscences *Tweed and Don*. "The black-and-white check after being introduced to the Oxford and Cambridge men became universally worn in a very short time."

The spell of high favor was short, but was historic because from this incident dates the habit of wearing tweeds for shooting, fishing, and for holidays. For sporting use, fustians, velveteens, and plain woolens had been largely worn hitherto; and there can be found, in the magazines of the early years of the 19th century, suggestions as to the best colors for shooters' dress—green for the early part of the season and dead leaf colors for winter.

Mr. Willis, an American who visited the Highland grouse moors in 1836, found little care taken there for invisibility. The sportsmen, he found, were "clad in a close jacket and trousers of shepherd's tartan." Too strong for the streets, black and white shepherd's check found its most lasting welcome upon the moors. Taken abroad by tourists, worn upon wrong occasions wherever holiday-making Englishmen went, this pattern and its grotesque rivals in loudness stamped the English throughout Europe as a nation of tweed-wearers.

It is to be noted that these check cloths were not at first called by the name of tweeds. The invention of the name came later when the furore of 1834 died down. Trade buyers liked the cloths, although they could no longer sell check patterns to the university bloods. Quieter styles were called for, and the mills responded by offering twills—simple brown-and-drab twills, or, as Scotchmen call them, "tweels."

Origin of Name

The story of the misreading of the name has been told frequently. It is thus given in Locke's own words: "Tweels" was often written, in the invoices to the Londoners, "tweeds" which was meant to be "tweelds," and the word came to be the common name of all this class of goods. The error was intelligible, for the twills came from the banks of the River Tweed, and it may be described also as fortunate. The name which would probably have been adopted in default of this accident is an uglier and more cumbrous one. This name, "saggathy" (Spanish *xagati*), is still applied in some English manufacturing districts to woolens exactly similar in color and pattern to the original tweeds.

Locke reported the error, but did not, as is sometimes said, himself commit it. In case the explanation should seem too simple to be true, it can be added that circumstantial evidence favors its truth. "Tweeds" to the outerworld, the goods were just "twills" or "narrow cloths" to Tweedside for many years after. Parish clergymen in Scotland sent up painstaking reports upon local industries to the New Statistical Account of Scotland in 1845, and in them, although the various products of the locality are carefully particularized, tweeds are nowhere mentioned. "Twill cloths and tartans" appear in a wage list of 1842, and there is corroboration of the error in McCulloch's dictionary, 1850: "To this narrow cloth (made in Galashiels) the general name of "tweed" was long given, because it was manufactured on the Tweed or in its immediate vicinity; but the term is more confined to a particular species of a mixed indefinite color."

Tweed became a name for fancy woolens manufactured in all districts, and to distinguish their own article the Scottish mills were ultimately constrained to emphasize the name of "Scotch tweed" as a distinction from other and often inferior makes. Based, undoubtedly, upon a hand-spun model, and woven not upon power but on hand looms, the first tweeds were palpably mill-made articles. They were of widely varying quality, worth in 1845 from 40c to $1.60 per yard 27 in. wide, and their merits established for them a preference which the hand spinner had never been able to win for goods of similar style made earlier.

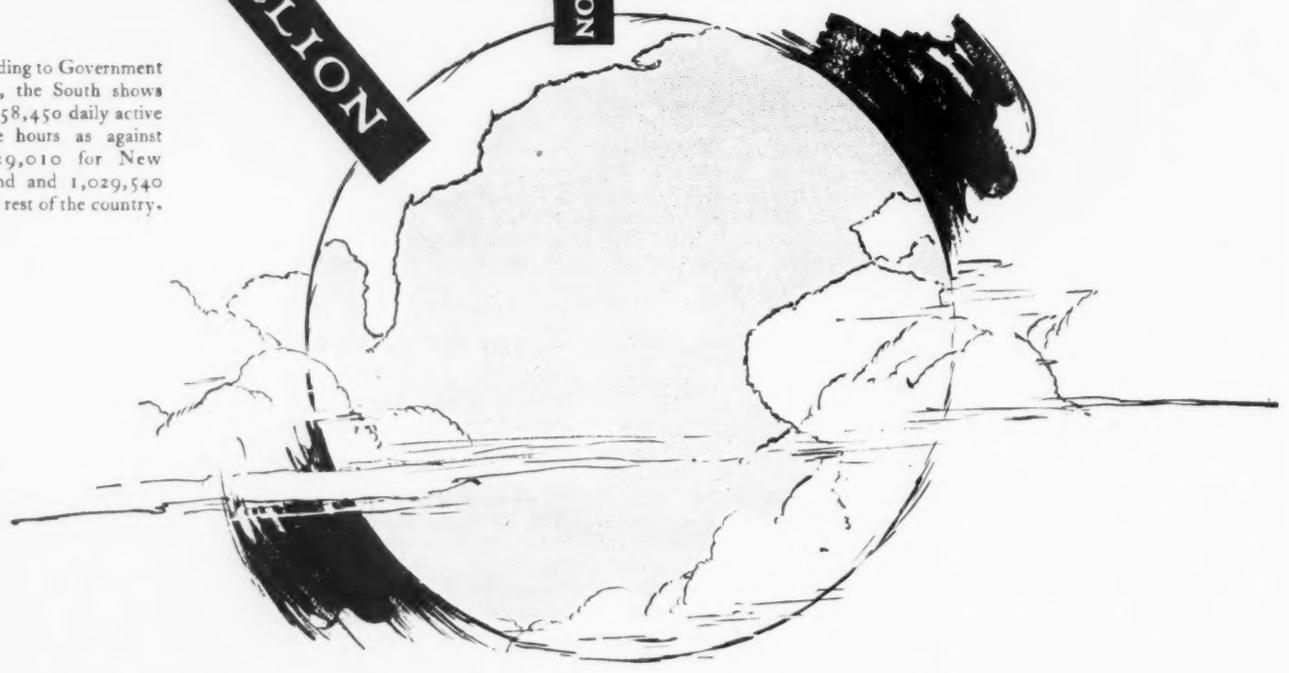
Mill-made tweeds became townsman's wear, and homespuns had never been this. The development of new designs and colorings made them acceptable to the best-dressed men of the early Victorian era, and, until the rise of fancy worsteds a generation or so later, a fancy suit was *ipso facto* a woolen suit, and manufacturers of high-priced tweeds had neither the necessity nor the opportunity to hedge their risks by offering tweeds and fancy worsteds side by side.

Mills Produce New Fabrics

The occasion of the 1830's is not the only one on which British woolen mills have had cause to borrow from the makers of primitive homespuns. In the 1880's the fact reached the public consciousness that meritorious homespuns of which little or nothing was known had long been produced

Better get where the mills are

Instead of where they used to be



According to Government figures, the South shows 193,258,450 daily active spindle hours as against 77,129,010 for New England and 1,029,540 for the rest of the country.

THE ratio of 193 to 77 is against the present location of the cotton mill machinery and supplies industry. 1926 Government figures show 193 million active spindle hours per day in the South, only 77 million in the East.

Here is your market. It is getting out of your reach. Slowly but surely it will be lost to you unless you move South.

And Atlanta is the logical location. It is the heart of the Southern textile district. Fifteen railroad lines radiate from Atlanta direct to your Southern prospects.

In the Atlanta Industrial Area you will have the benefit of important production economies: labor, raw materials, taxes, power, building costs and many more.

From tne Atlanta Industrial Area you can serve your trade properly—and profit more.

The Atlanta Industrial Bureau is ready to prove it to you.

Write INDUSTRIAL BUREAU
1932 *Chamber of Commerce*

ATLANTA

Industrial Headquarters of the South

Send for this booklet

The actual experiences of nationally-known concerns in Atlanta, and a thoughtful review of this city's many vital advantages as an industrial location. Sent free

in fancy styles in the western isles of Scotland and in northwest Ireland.

Owners of sporting estates in the highlands of Scotland obtained suitlengths of Harris and Lewis tweeds from their tenants. They noised the merits of the cloths abroad, set a fashion for them, and in some instances assisted to enlarge the supply by organizing "cottagers' labor." In so doing they contributed importantly to the development of business in holiday tweeds, because it was for sporting wear that these somewhat clumsily built fabrics were naturally best suited.

The ancient Highland custom of wearing intricately colored tartans survived even the attempt of the British government to suppress it after the rising of 1745. But long before then in the western isles the clansmen had evolved a costume more suitable for hunting than the brightly colored tartans, and still more suitable than the shepherd's check already mentioned. Proof of antiquity is found in a tract of 1597: "They (the islanders) delight in marled cloths, especially those that have long stripes of sundry colors; they love chiefly purple and blue. Their predecessors used short mantles or plaids of divers colors, sundry ways divided; and among them the same custom is observed to this day; but for the most part now they are brown, near to the color of the hadder (heather), to the effect that when they lie among the hadder, the bright colors of their plaids shall not betray them."

Even 150 years ago it could have been written by Dr. Johnson, that "To the southern inhabitants of Scotland, the state of the mountains and the islands is equally unknown with that of Borneo or Sumatra; of both they have only heard a little and guess the rest." The Isles are still remote and it is not a surprising matter that their contribution to the development of the modern fancy woolen trade came late. Yet it is not too much to say that the discovery of the existence of those tweeds shows its influence daily on every golf course.

Homespun Imitated

Harris homespuns were, of course, imitated on mill machinery, even down to the pungent aroma, which, in the genuine article, was the product partly of the crotal lichen used in dyeing and partly of the peat smoke from the fires at which the wool was dried. The imitation was mutual, for to encourage trade the islanders adopted mill colorings and mill designs, and to cheapen production they resorted more or less to machine-carding and the use of mill-spun warp. The changes have been of doubtful benefit to the peasant industry whether in the Highlands or in Ireland, but the traditional patterns of the cottage workers have left their mark upon the trade.

In return, mill competition has left upon the homespun industry one mark which is probably indelible. There are thousands of instances in the modern world in which machine-made goods bear the names of the hand-made products which they have superseded. Is there a single other case on record in which hand-made goods, produced for centuries before the advent of machinery, have assumed the name of their machine-made rivals?

There were no "tweeds" before 1855 or thereabouts. Homespuns were not "tweeds" in the Hebrides until approximately 40 years ago; they were "kelt" (women's work) to the crofters, and this name they shared with knitted goods. Yet "tweed" is their universal, indeed indispensable, name today, just as it is of the Donegal and other Irish cloths and of the fabrics produced at fancy prices by artistic amateurs for customers who are too fastidious for mere mill products. So has a name, initially coined to describe a mill-made article, firmly attached itself to fancy woolens of all origins.

The Noble-Comb Dabbing Motion

High Repair Costs—Attempts to Increase Brush Speed—New Invention Combining Brush and Air Blast

By Brompton

IT costs the Woolcombers, Ltd., of Bradford, Eng., no less than $145,000 per year in dabbing-brush repairs. It is also estimated that other combers in this district pay another $240,000 per year for brush repairs. At least 95% of these repairs are in connection with the brushes on the Noble comb. Although this comb is expensive also in leathers for running

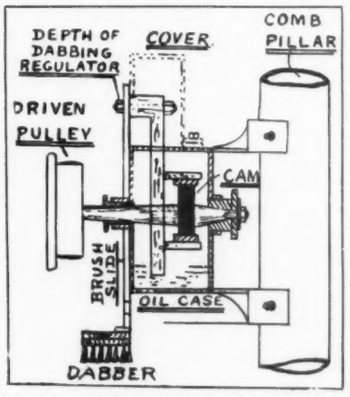


Fig. 1. Modern Form of Lister and Batly Invention

between the drawing-off rollers, it retains its popularity in a remarkable way. This speaks well of its efficiency as a comb both in quality and quantity of output; the former, quality, necessitating constant renewing of parts; and the latter, quantity, making this renewal possible from the economic standpoint.

Speed Desired

All combing machines are fitted with some kind of dabbing motion to insure the full use of the pins employed in combing. In no machine is the dabbing so important as in the Noble comb. The system of combing demands very quick and efficient dabbing where the circles meet, and the operation may be said to be a vital one. At the present time, any motion which does not allow a speed of at least 800 dabs per minute may be considered slow and a cause of low production. The trade is desirous of obtaining a motion where 1,200 to 1,600 will be a safe speed for brush dabbing, or, in lieu of this, some form of dabber in which brushes and their expensive upkeep will be eliminated.

In the early days of Noble combing, several crude devices were tried with varying success. In 1866, Brook's circular brush was invented. This was mounted horizontally across both circles where they met, its bristles pushing down the fibers as the brush revolved. To keep the wool down in the pins beyond the brush (until fringe combing had been completed), holding-down knives were employed. It seems rather strange that, after 60 years' experience, we are likely to be led back to some modification of the dabbing motion involving the use of holding-down knives. At the present time a combination dabber is being tried—a dabbing brush of narrow width, allowing a high-speed development without excessive vibration, followed by holding-down knives in a similar capacity to those of Brook's patent.

Why Speed Is Needed

The need for quick dabbing is in order to allow combers to produce a maximum amount of top, based upon their ability to run comb circles at a speed of 700 lineal inches per minute, maintaining a speed of one dab for every ½ in. of circle movement. Dabbing can only be effective at one point; viz., exactly where the circles converge. Slow dabbing means pressing wool into the circles at points other than this, and wool taking up positions between the circles and not in the pins escapes combing action.

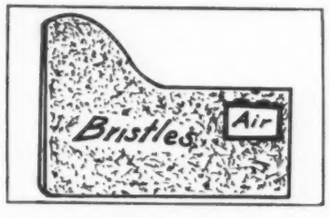


Fig. 3. Design of Pneumatic Brush

The brush dabbing-motion with the belt drive from the top shaft as we know it today was first introduced to the trade by the late T. Speight in 1877; but its success was not assured until Lister and Batty invented the short, light slide, driven by tappet or cam, with the working parts contained in an oil-tight case. This allowed a high speed without excessive vibration. The modern form of this mechanism is shown in Fig. 1, marked to be self-explanatory.

Another popular type of dabbing mechanism is shown in Fig. 2. This is known as the balanced dabber. In

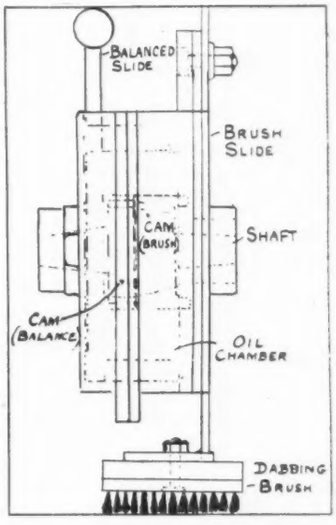


Fig. 2. The Balanced Dabber

this mechanism the weight of the brush and slide is counterbalanced by a slide working diametrically opposite to the brush. These drives are obtained by two eccentrics or cams on the same shaft, making the brush and balance rise and fall alternately, reducing vibration, and allowing a speed of 1,200 to 1,500 rev. per minute. The weight of a brush and slide is about 11 lbs., no mean weight to move at such a speed without vibration, in an unbalanced state. An economy of power, with a more uniform movement, is possible with this improved arrangement.

A Pneumatic Brush

However, in all dabbing motions where the brush remains as the sole means of dabbing, the wear and tear is great, and the upkeep is very expensive. It is now sought in England to dab wool by a combination brush and blast dabber. This has been recently patented by a Mr. Henry, a Bradford brush maker, who claims that two-thirds the former cost of brushes will be saved by its use.

The wear to brushes takes place at the common tangent of the circles; that is, where they meet. The circles enclose part of the brush and wear away (sometimes break off) the bristles at this point. Some brushes only last a few hours and then repairs probably costing from one-half to one dollar are necessary. Now it is proposed by Mr. Henry to substitute for the bristles at this point an air blast, the brush being reconstructed as shown in Fig. 3. The air blast may be developed from one main compressor for all the combs, or each machine may be fitted with its own compressor, this to start and stop with the machine itself.

The pneumatic dabbing brush is similar in shape and size to the existing brush, and existing brushes can be

adapted to include the principles of the new device. The pneumatic dabbing brush has no bristles to cover the actual tangent point; but a slot which allows a flat tube to pass through it when the comb is in motion is provided at that place.

The Bristles

The bristles used in dabbing brushes are made from hogs which are bred mainly in Russia, India, and China. These cost at the present time $4 per pound, having become scarce due to internal trouble in the first and last-named countries. The animals from which the bristles are obtained cannot be acclimatized everywhere, or no doubt the scarcity would soon be remedied.

Several attempts have been made to find a substitute for these bristles, but as yet without success. Many ingenious devices, such as wire brushes, dabbing knives, etc., have also been tried, but have been found unsuitable from some cause or other, the main one being the vibration of the comb.

Chemical Changes in Wool

Conclusions Drawn from Investigation of Effect of Sulphur Dioxide on Wool During Bleaching

By John L. Raynes

FROM a very comprehensive survey of the literature dealing with the bleaching of wool by sulphur dioxide and sulphurous acid, it is clear that very little is known about the chemical changes which occur in these operations. Some writers suggest that the natural coloring matter of the wool, which is insoluble in water, is converted into a soluble substance, which is removed when the material is subsequently washed; according to others, this conversion is due to reduction, involving the simultaneous oxidation of the sulphurous acid; while yet others suggest that the sulphurous acid combines with the coloring matter to form a colorless product.

From a theoretical point of view, no other suggestions of importance have been made, and any further reference to the original papers or textbooks would therefore be of little value. The matters there dealt with concern the non-permanency of the sulphur bleach, the relative merits of the dry (gas bleaching) and wet (liquid bleaching) process, the effect of the treatment on the properties of the wool, and other questions of practical importance, which throw no light on the chemistry of the process.

Dry Wool Colored

The first experiments which were made had for their object to ascertain whether any component of wool does or does not combine with sulphur dioxide. For this purpose unbleached wool, dried at 100° C., was treated with dry sulphur dioxide in the absence of air. Instead of being bleached, the wool turned a distinct lemon-yellow color, which persisted even after prolonged action. A similar development of color also occurred when the wool was treated with a sufficiently concentrated solution of sulphurous acid. As it is difficult to conceive that such an intense coloration could be produced by simple absorption, it must be concluded that chemical combination occurs between the sulphur dioxide and some component of the wool.

The yellow compound so formed, however, is most unstable, since, when the colored wool is placed under highly reduced pressure it regains its original (unbleached) appearance. The same result occurs when pure nitrogen, hydrogen, oxygen, or carbon dioxide is passed over the yellow material, and also when the latter is treated with a sufficient quantity of air-free water. It appears therefore that the yellow compound dissociates or decomposes even at ordinary temperatures.

It may also be inferred that the yellow compound is not formed from that coloring matter which is rendered colorless in sulphur bleaching; because, whereas both wet and dry wool give the yellow product, only the former is bleached when the sulphur dioxide is subsequently removed under reduced pressure. In other words, the disappearance of the yellow color is not necessarily accompanied by the bleaching of the wool. Whether the latter is bleached or not depends on some other change which has taken place previously, during the actual development of the yellow color. In order to try and obtain further evidence of chemical combination, very careful experiments were made on the absorption of sulphur dioxide by wool both in the "dry" condition and in the presence of known quantities of water.

Water Has No Effect

From the results of four concordant experiments it was found that one gram of "dry" wool at 17° and 760 mm. pressure absorbs 55 cc. of sulphur dioxide. The presence of a small quantity of added water did not make any appreciable difference in this result, but when the wool carried 75-100% of its own weight of added water, the volume of gas absorbed, calculated for one gram of "dry" wool, increased to 90 to 102 cc. From the average value thus obtained in all the experiments it was found that the increased absorption which occurs in the case of the wet wool corresponds very closely with that which should be observed if the additional volume of gas is merely dissolved in the water present. Thus one gram of "dry" wool, plus 0.75 gm. of water, absorbs 89 cc. of sulphur dioxide. But 0.75 gm. of water at 17° and 760 will dissolve 35 cc. of the gas. Subtracting this volume from the total, the absorption due to the wool is 54 cc., a volume almost identical with that obtained with "dry" wool and with wool containing not more than about 2% of additional moisture.

As it is highly probable that the weight of the sulphur dioxide which acts chemically on the colored components of wool is very small compared with that of the wool, it was not very likely that any conclusions could be drawn from the final results of such absorption values, since even the "dry" wool would contain water sufficient to catalyze chemical action. For this reason the rate of absorption was also studied, and, at the commencement of each experiment, readings were taken at intervals of fifteen seconds, the absorption values being then plotted in the form of curves. It was hoped that in this way some evidence of chemical combination might be forthcoming, but this was not the case. The regular parabolic curves which were obtained showed no initial irregularities such as might be taken to indicate a rapid chemical combination.

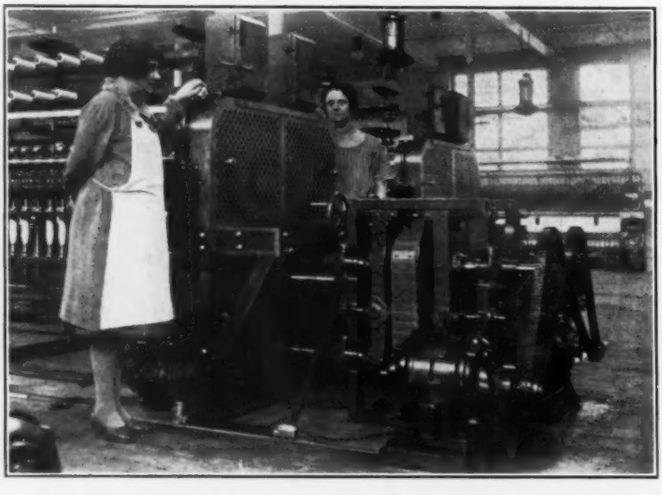
Shows Chemical Combination

In spite of the negative, quantitative results described above, qualitative experiments showed distinctly that the bleaching of wool with sulphurous acid involves the chemical combination of the acid with some component of the material. When moist wool, bleached with sulphur dioxide, is subsequently washed well with several portions of distilled water and then left in a vacuum over caustic potash during a period of about two weeks, it undergoes no visible change; but when it is then treated with dilute sulphuric acid it is partially debleached, and a distinct smell of sulphur dioxide can be detected. It may be concluded therefore that one factor in the bleaching of wool with sulphur dioxide is a combination of a colored component of the material with the gas, or more probably with sulphurous acid. If the latter merely combined with some colorless amino-acid or other basic substance to form a sulphite, the decomposition of such a salt would not be accompanied by a debleaching effect. It seems probable therefore that the colored substance which combines with the sulphurous acid is quinonoidal in constitution, or is at any rate a carbonyl compound. The additive product, morever, contrary to what seems to be assumed by some writers, is obviously only sparingly soluble in cold water.

Attempts were next made to find out whether, in addition to the fixation of sulphurous acid, there was any reduction of a colored substance to a leuco compound. If such a change occurred, sulphuric acid must also be produced ($H_2SO_3+H_2O = H_2SO_4+2H$) and its presence, after bleaching, if established, would lend strong

(Continued on page 143)

VARIABLE SPEED ON WORSTED TWISTERS



A New England French-worsted mill which is called upon to deliver various sizes of yarn with different twists recently found it necessary to have some arrangement for changing the speeds of the twisters according to the specialties to be made. The problem was satisfactorily solved by the Boston Gear Works in the manner illustrated by the above photograph.

Five double-head Societe-Alsacienne twisters were each equipped with two variable-speed transmissions. These transmissions, supplied by the Lewellen Mfg. Co. and known as "No. 11, Class E, complete ball bearing," were mounted in vertical position, bolted back and front. The sizes of pulley on the motor and on the frame were changed to obtain the speed required. These changes required the service of a mechanic for a period of from five to nine hours per machine. Each transmission is driven from a 5 hp. motor through a Boston-Renold silent and roller chain drive. The equipment replaces belt drives equipped with idlers and tighteners, and driven from two 5 hp. motors. It is claimed that the saving gained in friction load approximates 40%.

By means of the Lewellen transmission, it is now possible to vary the speed any amount between 750 and 8,000 r.p.m. in a half minute. The service of a mechanic is no longer needed for this work, and the loss in production is practically none. It is now possible, according to the master mechanic of the mill, to meet easily the demands of customers for widely varying yarns.

QUESTIONS AND ANSWERS

Service on Mill Problems and Correspondence With Readers

Labor Cost in South on Coarse Yarns

Technical Editor:

We would like to know what is considered a fair labor cost in the South for mills manufacturing coarse yarns from 2s to 8s, about 50% of the production being 8s, 40% being 5s and 6s, and 10% being 2s. We would also thank you to advise us the difference in winding one and two-end yarn on Universal winders; what per cent increase should be gained in winding two-end over one-end? (6110)

The following tabulation will indicate an approximate southern labor cost on the yarns referred to:

	2s	5s	6s	8s
Card room labor per lb.	$.0070	$.0095	$.0095	$.0150
Spinning room labor per lb.	.0025	.0056	.0065	.0085
*Winding labor per lb.	.0044	.0069	.0061	.0068
Packing labor per lb.	.0020	.0020	.0020	.0020
Total cost per lb.	$.0159	$.0230	$.0241	$.0323

*Cones or tubes.

As regards the relative production on single-end and two-end winding, the production on two-end would be nearly double the production on single-end except for the extra doffing involved and possibly a slightly lower speed in the two-end winding. Taking these into account, a fair guess would be that on two-end the production would be 60% to 80% greater per spindle than on single-end.

* * *

Treating Embossed Effect to Resist Steaming

Technical Editor:

We are submitting a sample of fabric which is embossed by the brass plate method, not by rollers. We would like to know of some size or other treatment which we can use on this fabric to make the effect permanent to steaming. (6106)

There is no simple solution or treatment that we know of which you can use to make the embossed effect permanent to heat and moisture. You will probably have to coat the fabric back and front with a waterproof finishing material which will not spoil the handle of the fabric. Experimental work will be necessary to determine suitable materials and processes to use, and we would suggest that the problem be placed before makers of finishing materials or one of the consulting laboratories.

* * *

Finishing Linen Toweling

Technical Editor:

Can you tell us how linen toweling like sample is finished? It is our own goods but is finished in an outside bleachery. My bleacher says he does not know how it is done. I am referring to the backfilling. How is it done and what is used to get the results? (6104)

For the backfilling of the linen toweling it would seem to us as though a mixture has been used containing about 50 lbs. of pearl corn starch, 20 lbs. of tapioca flour, 25 to 30 lbs. of talc, and 20 lbs. of white tallow softener to 100 gals. of starch. This filling should be applied on an ordinary backfilling mangle or Tommy Dodd, after which the goods should be dried, allowed to cool, then slightly conditioned, and finished on a calender with the heated metal rolls striking the unfilled side of the goods to bring up the luster as much as possible. This backfilled sample has been subjected to good pressure on a calender.

Causes of Broken Rayon Filling

Technical Editor:

I am enclosing a small sample of cloth from our regular goods which has been giving me plenty of trouble. You will notice that it is a 4 x 1 satin weave, excepting where the dots are. It is made on 17 harnesses and woven face down on narrow 25 harness, 4 x 4 box motion, center stop motion looms. All my trouble is in the artificial silk. I have some trouble with it kinking but my great trouble is broken picks.

The broken picks are always on the side where the eye of the shuttle goes all the way in the box. It breaks in such a way that the broken pick starts ½-in. from the selvage and catches on just before reaching the stop motion; therefore the loom keeps on running. The broken picks do not show very plainly until finished, making it very hard for the weavers to see them. I have tried grinding out the grooves in the binder and shuttle, making them wider and deeper. I have tried bending the binder different ways. I have timed the loom and tried the sweep all ways. My shuttles are lined with fur and hair brushes. In fact, I have tried everything with the loom and shuttles that I can think of, but all are in vain. I keep the artificial silk very moist.

The filling pattern is 1 pick 150 denier artificial silk; 1 pick 1/20 cotton; 1 pick 150 denier artificial silk; and 1 pick 1/26 worsted.

I have tried so many different ways that I begin to think that these looms are not made to run 150 denier artificial silk. I would appreciate your opinion on it. I will be pleased to get suggestions from you and will try them all, as you may have had this same trouble to overcome before. (6112)

The inquirer seems to have left little undone in trying to solve the problem of broken picks when using rayon filling on a pick-and-pick loom. This is a problem that faces all box-loom fixers when using artificial silks, natural silk, or linen. These are what are termed "wild fillings," and are liable to act in many unaccountable ways when the shuttle is suddenly arrested at the end of each shuttle box.

These fillings are all right when the shuttle is in motion. They are strong and will stand the pulling strains easily; but, just as soon as the shuttle begins to start again from a dead stop, a certain length of filling (depending on the distance from the selvage to the end of the shuttle box) becomes slack and out of control, particularly the length stretching from the shuttle eye at the end of the shuttle box and the selvage. The narrower the cloth and the wider the loom, the greater the problem becomes.

There are many things that will cause the filling to break with a trailing end. In this particular case the trailing broken end of filling must be very long to cause broken picks on a pick-and-pick loom. We are of the opinion that the cloth is narrow and that the timing of the dobby or head motion is for early closing and opening. The sley of the swatch submitted is fairly dense, and with a two-ply warp and the pattern woven face side down, makes a very good bed of yarn for the center stop fork to function with little danger of making center filling kinks. But it is just possible that the density of the yarn bed is responsible for the improper functioning of the center stop motion.

Pressure on Fork

By measuring from the broken pick of filling to the position of the shuttle eye, when the shuttle is in the box opposite to the one in which the filling break is said to occur, it should be possible to determine just how long a tail the broken filling carried when the center fork came down on the tail. It does not seem possible that a center fork, if properly set, could fail to function by one end of the tail of broken filling, and this being the loose end with practically no tension, arresting the progress of the fork in its downward movement.

In connection with the above remarks, we are under the impression that the fork is working with too little pressure. Fixers often lessen the pressure in order to avoid center kinks, and if the bed of yarn, through which the fork tines must pass, is somewhat dense, the fork will be tardy in reaching the lowest position in which the knock-off will function, and instead of the loom stopping it will continue to run with the broken pick in the cloth.

The very longest tail the broken filling can carry is that distance from the selvage edge to the shuttle eye. Assuming this distance to be half the width of the cloth, by the time the shuttle reached the opposite shuttle box there should be very little of the length of the broken filling near the center fork, and this would be the loose end with no tension. Even if the shed closed immediately after the end of the shuttle carrying the shuttle eye had left the shed, the center fork should commence to descend before the shuttle had entirely left the shed, and should come down on a perfectly loose end of filling. If the center stop motion was set to function correctly, the loom should stop with the shuttle in the box in the direction it was moving. This is where the center stop motion differs from the side stop motion. The purpose of the center stop motion is to stop the loom when the filling becomes exhausted or broken on the quarter, half, or three-quarter pick. If the loom does not stop when the filling has become exhausted on the quarter or half pick, or when there is even more than three-quarters of a broken pick in the shed, the stop motion is not functioning correctly.

Weave Pattern Face Up

We are of the opinion that the center fork is working under too little pressure. Owing to the pattern weav-

Technical Editor, TEXTILE WORLD:

Gentlemen.—Thank you for your letter of December 3d regarding the ——— sent to you.

I believe you have put your finger on the difficulty in the hand-written postscript to your letter. We unfortunately did not have large enough samples to send you, as we had previously ravelled and analyzed most of them.

Thank you very much for your attention to this matter.

Yours very truly,
HOUSTON HOSIERY MILLS
By L. A. Parsons

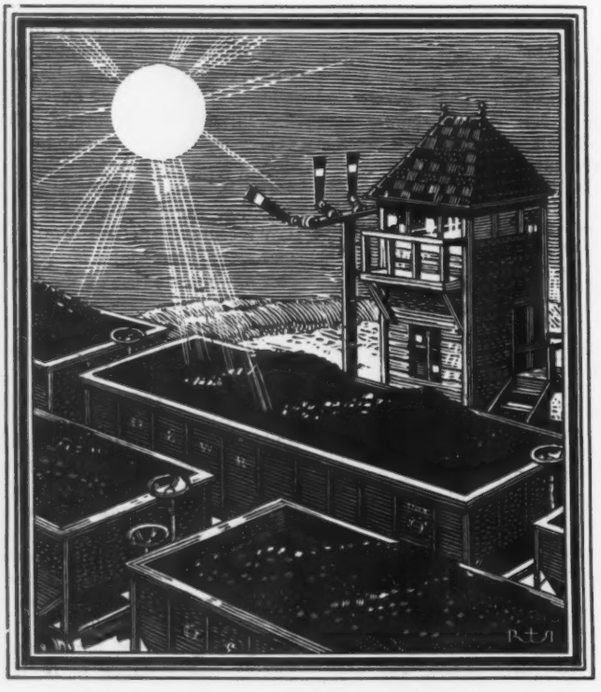
In this department, we undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. In this way answers can be given which will be of immediate technical value to the correspondent and to others in the same line. Inquiries pertaining to textile processes, machinery improvements, methods of management, the markets, etc., are especially invited as well as any legitimate discussion on the views expressed. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as an evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

If the question is not of general interest to textile readers and involves expensive investigation, a charge covering the cost may be made, of which the inquirer will be advised before any expense is incurred.

Letters expressing opinions or voicing criticism will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.

For prompt service, technical inquiries should be sent directly to the Technical Editor, TEXTILE WORLD, 65 Franklin St., Boston, Mass.

Sold 140 Carloads of coal— *in hot weather*



IT WAS SWELTERING MAY weather in Omaha—a bad time, you might think, to sell coal. Yet a coal company manager and his assistant compiled a list of 200 dealers in Nebraska, Iowa and Missouri who were good winter customers. Two men in three days made the calls, the charges approximating $200. They sold 140 carloads, $21,000 worth. Ordinarily it took three salesmen two months to cover this same territory. Never before in hot weather had sales run so high.

FROM ALL KINDS OF BUSINESSES come reports of the use of long distance calls to get more accomplished, at less cost. Sometimes a task can be done in days by telephone that otherwise would take months. Business can be secured that otherwise would be lost. Salesmen and executives can conserve their productive time and so increase the good results of their work.

Long Distance is as important to inter-community and inter-sectional business as the local telephone is to local affairs. How can any business concern reach its greatest development without a regular use of long distance calls?

Anywhere is as close as your telephone. Is there some distant call that should be made now? You'll be surprised how little it will cost. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

Correspondence with Readers—Continued

ing face down, four-fifths of the warp yarn is on the bottom shed on every pick, and this being a fairly heavy two-ply yarn with the sley about 64 ends to the inch, the center fork does not penetrate the dense bed of yarn quickly enough to permit the knock-off to become operative. It would be well to weave this cloth with the pattern face up. Set the pick motion so that the shuttle would still be traveling towards the end of the shuttle box when the center fork comes in contact with the filling, which will still be under tension. This should prevent center kinks. As there would only be one-fifth of the warp, instead of four-fifths, opposing the downward movement of the fork, the fork would easily pass through the lighter bed of warp yarn, and, reaching the bottom of the slot much quicker, it would insure the stopping of the loom, no matter what the length of the trailing broken end of filling. If a filling kink should occur once in a while, it would not show on the face of the cloth. It would be on the back of the cloth and would hardly be noticeable with this type of weave.

So far we have dealt only with the problem of the loom continuing to run when the filling has broken and the shuttle is carrying a long broken length of filling and is hard to control, but it rarely breaks under tension, providing bobbins of correct shape are used. It is a filling that is very tender to shock and contact with iron and wood.

Causes of Breaks

Filling breaking in the manner described by the inquirer can be caused by contact between the reed and the temple when the pick is being inserted. This kind of break will leave the longest trailing end of filling. It is caused by permitting the reed to touch the temple as the lay of the loom comes forward. Such a break of filling can also be caused by the bottom of the temple touching the race place of the loom. If the picker spindle is set too far in at the butt, or part of the spindle nearest the end of the shuttle box, this will cause that part of the shuttle at the opposite end to the shuttle eye to be forced to the front or binder side of the shuttle box, when the shuttle is being forced from the box. As the shuttle is coming out of the box, the filling becomes loose and out of control, and if the side of the shuttle is snapped against the binder side of the box it is likely to strike the filling between the wood of the shuttle and the iron side of the mouthpiece at the entrance of the shuttle box. Every time this happens the filling will surely be cut, not from any strain but from violent contact.

The butt end of the spindles on all box looms should always be set at least a strong 1/16 in. further from the picker slot than the tail end of the spindle.

When the spindle is positioned in the manner described above, the picker, when delivering the shuttle, exerts a frontal pressure to that part of the shuttle nearest the end of the shuttle box. As the picker moves from the end of the box this pressure is increased and the opposite end of the shuttle is forced away from the binder and mouthpiece and towards the reed. This is as it should be, for the shuttle should always be forced towards the reed and not towards the mouthpiece. It is not the binders that cut the filling; it is the contact between the shuttle and the mouthpiece at the entrance of the shuttle box.

Unlike a single-box loom, where the shuttle is controlled by the picker fastened to the picker stick, the picker on the drop-box loom is controlled by the spindle and will adjust itself to any position in which the spindle is set. The throw of the shuttle can be fairly well governed by the position of the picker spindle.

There is one more piece of advice we will offer, and that is to change the boxing of the filling in different ways. What will run well on one loom may not be suitable for another loom. It is worth a trial, but at the best it is only a makeshift and would not be a solution of the problem.

Correctly shaped rayon filling bobbins, and adjustments as suggested, would be more likely to solve the problem.

Replacing Obsolete Equipment

The useful life of a loom depends upon many factors, it is pointed out by CROMPTON & KNOWLES LOOM WORKS, Worcester, Mass. Among these are type of loom, class of goods woven, speed, and upkeep. Modern labor conditions compel simplicity, standardization, and greater sturdiness in looms. Buyers demand better quality of weaving.

ANY views which we may advance as to the wisdom or necessity of replacing old looms with new ones will probably appear as prejudiced. Any figures which we might submit as to the economic life of looms might appear as biased. From the machinery builder's perspective the question is a double one.

On the one hand it is the claim of well-established manufacturing concerns that their products will stand up through the years and will still be standing up when the products of other concerns have perforce been scrapped. They build their machinery with a long life in mind, as well as a first impression. On the other hand, the successful manufacturer is constantly improving his product. He may not bring out yearly models, as is the custom in the automobile industry, but he has at least one eye constantly focused on his experimental department, and the changes in design and construction which are in the offing—one, two, or five years ahead. All of these changes are soundly conceived and calculated to make performance more economical and better as to quality. Higher quality of woven goods, more looms per weaver, less expense of upkeep, wider latitude in goods that can be woven on a single machine—these are the beacons for the loom builder.

The diminishing number of old-school fixers and weavers compels simplicity, standardization, and greater sturdiness. The intensiveness of competition in the weaving industry demands greater speed and reduction of overhead in every department. The requirements of cutters, jobbers, and retail purchasers demand quality as never before.

We are often asked, "What is the life of a loom?" The answer, if it could be given, would depend upon many factors, among which are care received, type of loom, type of goods woven, hours run per week, speed of loom, etc.

In our own plant we operate on the theory that any machine for which there is a better substitute on the market should not be given floor space.

* * *

Slazy Full-Fashioned Stocking

Technical Editor:

I am enclosing a finished sample of 39-gauge ladies' full-fashioned hose which has a slazy finish. If you will take notice of the width of the stocking you will see it is very narrow. I am also enclosing the same goods in the raw; the gray in particular is the same lot as the finished goods. We use softened water for the knitters' troughs. There are exactly 48 courses per inch in the raw in these goods. My trough and felts in which the silk runs make the work damp. My machines are in good adjustment. My lather for the winding is 3½ oz. soap to 1½ oz. of neatsfoot oil per 8 gal. I think perhaps the silk is too hard. The length of the legs in the raw is 29 in.; finished 28½ in. This is a 5-thread stocking. (6093)

It has been very common for manufacturers using gum silk to have this trouble. The cause may be the silk. In cases where the knitting is perfectly clear in the gray and comes up slazy after dyeing, it can be due to injury to the silk in the bath at the throwsters, where the soaking may have been overdone. Or the dyers may overboil and cause the same injury; when this is the case and the fabric is weakened, these slazy places can be caused by the dyer over-crowding his bags in the dye tub and overloading the extractors.

The regular slazy lines as seen in the gray and finished samples are due to the silk not being damp on the cone or bobbin before going through the trough or over felts, in which case the silk will not be wet long enough before being put through the knitting process. As the thread will not be wet through, it will not "stay put;" it will disarrange itself in the needles and sinkers and not come through clear, which is called slaziness.

There is another trouble which will result in much the same appearance, called slurgalling, which is due to some unevenness in the machine and causes the fabric to be made with every other course tight. Or, expressed another way, one course is loose and the next tight, the next loose, the next tight, and so on; producing exactly the same effect as slaziness except that slurgalling usually covers the whole width while slaziness shows up in spots.

If you carefully examine the samples, both finished and in the gray, you will see what is meant. We would suggest that the slurcock be examined to see that it is square, and that there is not too much play between the nose of slurcock and jacks when they are all the way forward.

The trouble with the narrowness of the finished hose is, first, the yarn in the welt is too heavy for the silk leg, causing the welt to "stand out" while the silk shrinks. Second, there should not be any narrowings after the welt as they make this part still narrower and the silk is very uneven at this point. This effect is caused at times by the boarder pulling the hose on the board when it is too dry (he should sprinkle it in this case). If the stocking is taken out of the dryer before it is properly dry and pulled off the board, it will "stretch" like this sample. Third, the ankle is far too long between the last leg narrowing and the topping line, which should not be more than 7 in.; this sample is 8¾ inches, causing the ankle to look "long and skinny."

One thing more regarding slaziness. If the silk is wound damp on bobbins and is not properly kept damp, the outside will dry out. The wet part, which is being constantly uncovered during unwinding will knit clear, but each length of dry yarn on the outside of the bobbin will cause slaziness. If damp cones are used the same thing occurs if the yarn at the top and bottom of the cone is allowed to dry out.

"WE were successful" is an old story in regard to Clearing House results. In this case the assistant treasurer of a large worsted plant in New England uses this phrase in telling of the results of the following small ad:

Assistant Superintendent in a Worsted Combing and Spinning plant. Must be thoroughly experienced. Prefer a technical college graduate. Address Adv. —Textile World.

With nineteen replies to choose from, little wonder this advertiser was pleased. Many a mill executive has found this speedy, low-cost service indispensable in securing men of caliber.
See pages 150 to 153, this issue.

Every mohair manufacturer realizes the importance of being able to say a piece of goods is "mothproofed" . . . but it means still more to be able to say it is "mothproofed" with

LARVEX

For everyone knows Larvex. It is nationally advertised. It is sure protection—tried and proven in thousands upon thousands of homes. It is unquestionably the best known preventative of moth damage.

Moreover Larvex is the simplest, easiest mothproofing agent to use. Just put it in the last rinse water after dyeing. Immerse the fabric in it for twenty minutes. Then it is mothproofed!

You don't need special handling. No extra operations. Use your regular dye kettles.

You will find Larvex saves money and does the job better and easier.

Let us show you how Larvex can bring positive mothproofing at a lower figure than you ever thought possible. Return the coupon today for the whole story.

COUPON

T.W.-6-4-27

NEWPORT CHEMICAL WORKS, INC.,
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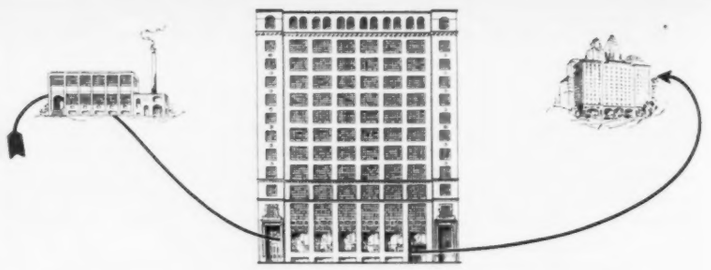


Your Goods Made "*Ready for the Needle*"

We offer a final finishing service at the textile crossroads—a final link between your mill and the market. Briefly, the Tex-in-Takt process finishes and conditions woolen, worsted and knitted fabrics. The work is done on a David Gessner Decating and Conditioning Machine. Goods are made "ready for the needle" without excessive cost and loss from shrinkage.

The quality of the work is consistently good. Cockling and washing streaks are eradicated and prevented. All kinds of merchandise, where lustre is desired, can be made spot-proof. Cloths are made absolutely shrink-proof so that they will not shrink under the iron and are subject to little shrinkage in the piece.

Our service also includes inspection and detailed reports—packing in regular mill fashion for distribution where you will.

Write for further information.

The Tex-in-Takt Treatment is adapted for the following:

All Worsted Fabrics	Poplins
Silk and Wool Mix	Poriet Twills
Cotton and Wool Mix	Twill Cords
Decorated Fabrics	Gabardines
All Closely Shorn Fabrics	Sheen Fabrics
Knit Fabrics	Broadcloths

MORRIS GARFUNKEL, INC.
DIVISION AMERICAN SHRINKERS CORP.
Textile Shrinkers Since 1900
318-326 W. 39th St. New York

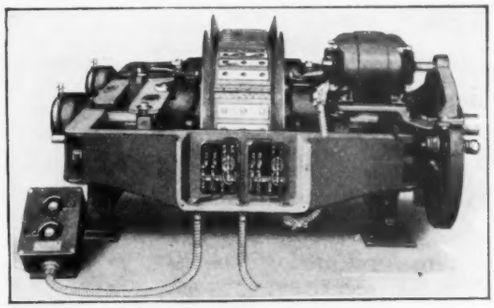
TEX-IN-TAKT
DAVID GESSNER DECATING AND CONDITIONING MACHINE USED EXCLUSIVELY

NEW MACHINERY & PROCESSES

Electrical Remote Control

Variable Speed Transmission Operated from Any Location

The Reeves Pulley Co., Columbus, Ind., has recently brought out a new device known as the electrical remote control for use with the Reeves variable speed transmission. The company states that with this control it will be possible to accurately regulate the speed of any machine from any desired place in a plant. Various types of push-button electrical remote controls have been installed on the Reeves transmission in the past, but this is the first control of this type which is entirely self-contained on the transmission.



Electrical Remote Control on Reeves Variable Speed Transmission

A receptacle is cast in the frame end of the transmission, and in this is placed an auxiliary magnetic switch which is operated from a push-button station located at any distance from the transmission itself. The magnetic switch is said to be constructed so that it is universal as to current characteristics, thus making a transformer unnecessary. Two buttons, one marked "Fast," the other marked "Slow," are operated at the push-button station, and it is only necessary to push these buttons to change the speed as required. In case the operator should hold the push button beyond the slow or fast limits of speed, a patented safety clutch prevents the motor or transmission from becoming jammed.

A tachometer may be located at the push-button station so that the operator may, at all times, know the exact speed at which the machine is running in order to change the transmission speed to give the desired machine speed.

It is claimed that the electrical remote control is particularly adaptable for use on machines where, with a hand control, it would be necessary for the operator to leave his position to change the speed of the transmission. It thus prevents interruption in work and will allow the operator to make conveniently all the speed changes desired, and in this way utilize the variable transmission most efficiently.

Pumps for Rayon Solutions

Small Number of Parts and Simple Construction

The Wicaco Screw & Machine Works, Inc., Philadelphia, Pa., have, since American industry first became interested in the commercial manufacture of rayon, specialized in designing and producing rayon spinning equipment. Among the requisites of spinning pumps as stated by the Wicaco company are: ease of maintenance and cleaning; production of all marketable deniers with little adjustment; production of uniform filament without variations; durability; and adaptability for use with any of the various types of brackets or benches.

It is claimed that the improved, simple, scientific construction with but a small number of parts allows for economical and efficient operation and for easy cleaning, with the advantages attendant to fewer replacements and consequent less time lost when production is stopped for cleaning or repair. The improved Wicaco pumps are self-lubricating; it is stated that in all rayon processes, except the acetate, the fluid itself acts as the lubricator. Pumps for use in the manufacture of acetate silk are provided with special stuffing boxes, so arranged that the grease is prevented from discoloring or otherwise affecting the rayon solution.

The improvements in Wicaco pump design have made it possible to adjust the pump very simply for any desired denier, and the filaments produced are of predetermined uniform diameter. Special grinders and lappers are used in making the pumps, so that absolutely accurate and uniform parts are produced, and so that leakage and defective operation of the pumps is precluded.

Pump for Rayon Solutions

The improved pumps are available in a variety of types, with any desired number of plungers, in models adaptable to any style pressure bottle, or in models requiring no pressure bottle. In the accompanying illustration is shown Type A pump which has offset lugs; 2, 3, 4, 5, or 6 plungers; Wicaco standard bracket; any desired style of pressure bottle; and a spiral gear to compensate for irregularity in drive line of the bench in which the pump is to be installed. The knurled nut at the right of the pump controls the stuffing box, which is removable for grease packing. It may be seen also that the intake is finely machined at the bottom of the offset, and is radius, instead of counter, bore.

Current-Measuring Set

"Pliers-Type" Does Not Require Opening Conductor

A split-core current-measuring set that is especially valuable in determining the load on feeders or distribution net works has been introduced by the General Electric Co. The set is intended for use in determining the alternating current flowing in a conductor without opening the conductor to insert an ammeter or a current transformer to operate the ammeter. Each set consists of a transformer with a hinged magnetic circuit, leads, and one or more ammeters. It can be used to advantage when it is not required that the accuracy be of the order that can be obtained only with self-contained ammeters or portable current transformers and ammeters.

A distinctive feature of the set is the ease with which the transformer can be clamped about the conductor. It operates like pliers—with one hand—thus insuring safety for the lineman. In the case of overhead lines, the transformer can be clamped from below, thus avoiding the necessity of reaching over high-voltage lines. Flexible multi-conductor leads, 50 ft. in length, are supplied with each set.

Two sizes of transformers are supplied, one having a window opening of 1¼ in. and the other 2¼ in. in diameter. The former is rated 75/125/250 amperes primary, 2.5 amperes secondary, when used with a single indicating ammeter. This transformer is also supplied with two indicating ammeters, one having a 2.5-ampere winding, the other a 5-ampere winding. The transformer when so used is rated 75/125/250: 2.5 and 150/250/500: 5 amperes.

A small-sized indicating ammeter, Type P-8Y, is furnished. It has a cylindrical switch by means of which the various ratings of the set can be readily obtained without the necessity of changing connections at either the transformer or the ammeter. Each indicating instrument is calibrated with the transformer with which it is to be used, so the scale reads directly in primary amperes.

The recording instrument listed as standard with the sets is Type CRP-4, a portable round-pattern instrument with an 8-in. diameter chart and a one-day clock. The chart normally furnished makes one revolution in 24 hrs., but other chart speeds such as one revolution in 1, 6 or 12 hrs., can be furnished. Similar recording instruments with eight-day clocks or with Warren motor-driven clocks and with different charts can be supplied.

The recording ammeters do not have the ratio-changing switches, as do the indicating instruments. Changes in ratio are made by changing connections of the multi-conductor cable at the ammeter. Recording ammeters are supplied with standard 5-ampere charts.

RECENT TEXTILE PATENTS

LOOMS, Intermittently operable take-up mechanism for. 1,628,489. H. H. Burdett, Hopedale, Mass. Assignor to Draper Corp., Hopedale, Mass.

LOOMS, Let-off mechanism for. 1,628,540. R. M. Hughes, Clinton, S. C. Assignor of one-half to R. E. Ferguson, Clinton, S. C.

LOOMS, Thread-feeding device for tufted fabric. 1,628,387. F. Boyer, Paris, France.

MACHINE and process for separating threads from fabric. 1,628,373. L. I. Thompson, Portland, Ore.

RIBBER machine attachment. 1,628,572. F. Bolinski, Pinckneyville, Ill.

SPINNING frames, Bunch building mechanism for. 1,627,615. W. T. Morgan, New Bedford, Mass. Assignor to Whitin Machine Works, Whitinsville, Mass.

TEXTILE processing or finishing machine. 1,628,261. G. J. McGann, Providence, R. I. Assignor to Slasher Rolls Co., Massachusetts.

WEB winding machine. 1,628,323. N. Marcalus, Plainfield, N. J.

WINDING and dyeing apparatus. 1,627,849. R. G. Jennings, Elmira, N. Y.

WINDING machine. 1,628,322. N. Marcalus, Plainfield, N. J.

YARN cleaner. 1,628,523. V. Waitkus, Baltimore, Md.

SPINNING frame, Ring. 1,629,366. E. Stubbs, Springfield, Vt.

SPINNING machine. 1,628,778. F. K. Hendrickson, Whitinsville, Mass. Assignor to Whitin Machine Works, Whitinsville, Mass.

SPINNING machines, Twisting head for. 1,628,775. S. H. Helland, Whitinsville, Mass. Assignor to Whitin Machine Works, Whitinsville, Mass.

SPINNING, twisting, and like machines, Lappet and thread guide of. 1,629,069. N. Cook, Manchester, England.

TEXTILE materials, Drying. 1,629,167. H. Krantz, Aachen, Germany.

WOOL washers and the like, Press roll for. 1,628,835. F. L. Furbush, Westford, Mass. Assignor to C. G. Sargent's Sons Corp., Graniteville, Mass.

LANE

CANVAS STEAMING BASKETS

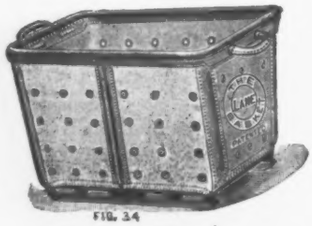


Fig. 34

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Steams freely.
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Have for 30 years filled one of the hardest jobs in the Textile industry in a most satisfactory manner.

Withstand effects of steam and moisture to a remarkable degree.

Made also in slightly modified design for sprinkling, aging, etc.

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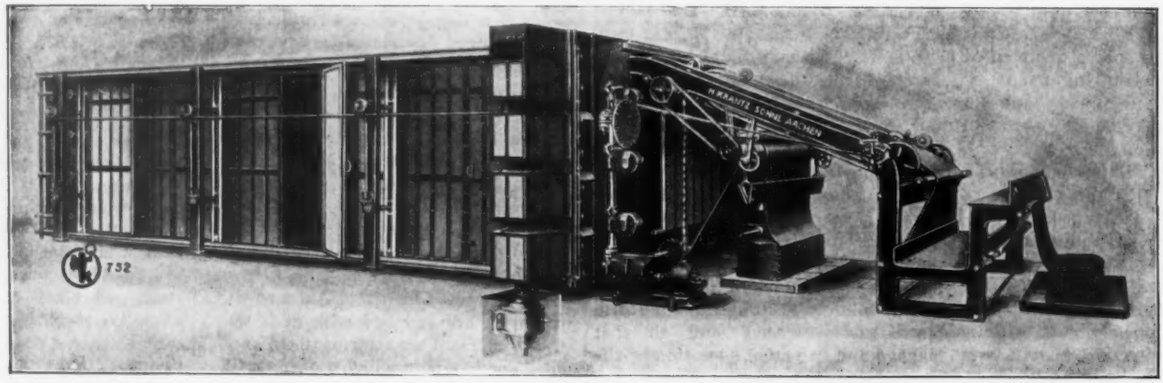

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Dries the cloth with circulating air currents; the temperature in each two successive layers being lowered to prevent the deadening of the wool fibres and to keep the heat from affecting the colors.

By re-using the warm air circulated in the lower layers again in the upper or wet layers great economy of steam is realized; up to 50%.

By running the chains in covered channels, we absolutely prevent oil or grease spots on even the most delicate shades.

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Ask for pamphlet No. 252.

See cdlog CONSOLIDATED TEXTILE CATALOG

REPRESENTED BY ALFRED SUTER TEXTILE ENGINEER 200 FIFTH AVENUE NEW YORK

MILL NEWS

COTTON

New Construction and Additions

***Lincoln Mills of Alabama,** Huntsville, Ala. Rapid progress is being made in the construction of the addition to this plant which is a concrete structure of three stories with full basement. Workers are now engaged on the third story. Streets are being surveyed and lots laid off for the construction of houses that are to be constructed for use of additional operatives.

Boylston Crown Mills, Dalton, Ga., have recently added six new Saco-Lowell twisters to their equipment.

***Chicopee Mfg. Co.,** Gainesville, Ga. All buildings have been completed, machinery has been practically all installed, and everything is in readiness for the opening of the new Chicopee mill for which J. E. Sirrine & Co., Greenville, S. C., are engineers.

Ensign Cotton Mills, Hampton, Ga., have recently installed ten new Universal winders and two ball warpers.

***West Boylston Mfg. Co.,** Easthampton, Mass., has definitely decided to transfer 30,000 spindles and auxiliary machinery from Easthampton, Mass., to Chisholm, near Montgomery, Ala., as stockholders voted in favor of this move at a recent special meeting. A site of 127 acres has been purchased and bids for construction of the new mill are expected to be let June 8. About 110 houses for workers will be erected. The new mill will be operated under the name West Boylston Mfg. Co. of Alabama.

***Chadbourn (N. C.) Cotton Mills, Inc.,** recently chartered with capital of $100,000, have bought a one-story, 100 x 200 ft. building at Chadbourn which they will equip with 6,000 spindles and 40 wide dobby looms for the manufacture of bedspreads and damasks. It is expected to start operations about Sept. 1. Electric power will be bought. J. E. Koonce is president; Dr. W. F. Yates, treasurer; G. J. Nord, Gastonia, N. C., consulting engineer and manager, will buy all machinery and supplies. Product will be sold through the Clark-Richards Co., 43 Leonard St., New York.

J. W. Strout, Gastonia, N. C., is investigating the possibilities of establishing a braiding mill at Lincolnton, N. C. Mr. Strout met with members of the Kiwanis club and outlined his proposition to them. He proposes to begin with a capital of $15,000 of which he would invest $10,000 of his own funds, the remaining $5,000 worth of stock to be taken by citizens of Lincolnton. His present plans call for 50 braiders.

***Cross Cotton Mills Co.,** Marion, N. C., in addition to 17 new Saco-Lowell cards and 1,000 Whitin spindles, is also installing 36 deliveries of Saco-Lowell drawing frames and one Foster new high speed winder to its equipment. An extension has been built to house the new machinery.

***Kesler Mfg. Co.,** Salisbury, N. C., is making satisfactory progress in the construction of its new picker house and opener room. George C. Bell, Charlotte, N. C., is engineer in charge.

Brandon Mills, Greenville, S. C., have completed installation of new opening and cleaning machinery and have equipped one-third of the plant with Barber-Colman automatic spooling and warping equipment. Other improvements have also been made.

***Woodside Cotton Mills Co.,** Greenville, S. C. Foundation of the new $30,000 unit for the grammar school of this company has been completed and workmen have started laying brick for the walls of the first floor. This building will contain nine rooms as well as the executive offices of the school.

Fact and Gossip

Mary Leila Cotton Mill, Greensboro, Ga., is electrifying its plant. Power will be supplied by the Georgia Power Co. The plant is running day and night.

***Nockege Mills,** Fitchburg, Mass. The realty of this company was sold at assignees' sale on May 25 to Charles P. Dickinson, a large owner of real estate in Fitchburg, who bought for investment, for $40,000. The property includes 142,000 ft. of land, 170,000 ft. of floor space, a four-story brick mill building, a two-story brick auxiliary building and a heating plant. The machinery and equipment was sold in 1162 lots to different individuals, for $21,830.70, added to which $4,000 was received for equipment by private sale. Samuel T. Freeman & Co., Philadelphia and New York, were in charge of the sale. The property is to be placed in shape immediately for renting.

Patchogue-Plymouth Mills Corp., Lawrence, Mass., is now running on close to capacity schedule and will maintain this basis of output for an indefinite time.

Nashua (N. H.) Mfg. Co. has adopted a night shift in several departments at its two local mills, with prospect of increased output in other divisions at an early date.

Sea Island Thread Co., New York, N. Y., has arranged for an increase in capital from 3,500 shares of stock to $250,000, and 35,000 shares of stock, no par value.

Dunlop Tire & Rubber Corp. of America, Utica, N. Y., has resumed night operations in addition to full time day schedules.

Kinston (N. C.) Cotton Mills were sold May 30 to W. B. Douglass, agent for Kinston interests, for $6,200, subject to a mortgage of $215,000, or a total cost of $221,200. The sale is subject to confirmation of the court.

Catawba Spinning Co., Mount Holly, N. C., has sold to the Gaston County Dyeing Machinery Co., of Stanley, N. C., two tracts of land in River Bend township. It could not be learned what use the machinery company will make of the land.

Warren (R. I.) Mfg. Co., has begun sale of its real estate holdings, disposal of two-thirds of which is now in the hands of G. L. & H. J. Gross, of Providence. They will sell 200 houses owned by the company, which has rejected syndicates' offers for the entire group to give the tenants opportunity to buy the houses.

H. C. Townsend Cotton Mill, Anderson, S. C., suffered about $30,000 damage by fire believed to have originated from an electric motor on May 21. Operation of the mill will continue while the damaged section is being rebuilt.

Brandon Mills, Greenville, S. C. Official announcement has been made of details for the erection of a new 12-room two story and basement floor brick school unit for this community. Plans for the new structure, which will cost at least $40,000, are now being completed in the office of William R. Ward, Jr., local architect. Moving of several houses to make room for the new structure has already begun.

Lancaster (S. C.) Cotton Mills recently had four cottages destroyed by fire.

* Indicates previous mention of project.

WOOL

New Construction and Additions

***Bungalow Rugs,** Scottsboro, Ala., has nearly completed construction of its new two-story plant where it is planned to approximately double the present output.

Talcott Bros. Co., Talcottville, Conn., is building a two-story, 50 x 50 ft. addition which will be used for expansion of the carding and twisting departments. Electrically operated equipment will be installed. E. T. Hallcher, Rockville, Conn., has the contract, and early completion is anticipated.

Gaunt-Knibb Co., Pascoag, R. I., a new firm of which Rowland Gaunt, formerly agent of the Premier Worsted Mills, Bridgeton, R. I., is president and Cyril W. Knibb treasurer, is moving machinery into the building at Pascoag, formerly known as the Lincoln Mills of A. L. Sayles & Sons Co. Production of fancy worsteds will begin this month with an equipment of 20 looms.

Fact and Gossip

Lee Worsted Co., Baltimore, Md., which is owned by L. Greif & Bros. of that city, will be moved to Petersburg, Va., as soon as the necessary alterations can be made in the building formerly occupied by the A. Wright Shoe Co., which has been leased by the Lee company. The name will be changed to the Lee Weaving Co., with the following officers: Edward Eigenbrun, president; Bernard Syme, vice president; Irwin S. Eigenbrun, treasurer, all of Petersburg. It is expected to begin operations early in August. The entire output of the plant will be utilized by L. Greif & Bros.

American Woolen Co., Boston, Mass., this week discontinued the group life insurance plan which had been in effect at all its plants since the spring of 1919. The insurance covered employes in amounts from $750 to $1500 depending on the length of service. While the company expressed regret that this action was necessary it said that "business conditions are such that it is necessary for the company to exercise its right of discontinuance."

***Spencer (Mass.) Woolen Co., Inc.** The mortgagee's sale of the machinery and equipment of this plant announced for May 28, was adjourned indefinitely because of the filing by the company of a bill in equity against Joseph S. Edinburg, Cambridge, Mass., the mortgagee, asking for an injunction to restrain the sale on the ground that all due on the mortgages has been paid and that the respondent refused to surrender the mortgages.

***Jamesville Woolen Mills Co.,** Worcester, Mass. George H. Mason, a Worcester attorney has been appointed by the U. S. District court receiver for this company in a bond of $500. The company was adjudicated bankrupt on March 29 and the first meeting of its creditors will be held on June 2, when a trustee will be appointed.

American Woolen Co., Lebanon, N. H., is operating at its Lebanon and Mascoma Mills, both at Lebanon, with increased production schedule, and will continue the present basis for an indefinite period.

Standish Worsted Co., Penacook, N. H., is said to be arranging an early increase in production schedule.

Mohawk Carpet Mills, Amsterdam, N. Y., are now operating on a 24-hour daily schedule in many departments.

Chatham Mfg. Co., Elkin, N. C., is running on an overtime schedule and will continue on this basis indefinitely.

Crown Worsted Mills, Inc., Providence, R. I., which have been idle for some time, resumed operations on May 31. The mills will be run under the direct supervision of Henry Wood, who has acquired a controlling interest in the plant. Mr. Wood was, for several years, superintendent of the Cranston Worsted Mills, Bristol, R. I. The Mills will manufacture worsted yarns of various grades and sizes to meet the requirements of the trade.

KNIT

New Construction and Additions

***Unique Knitting Co.,** Acworth, Ga., has completed Unit No. 1 of its plant at Acworth and is now installing some machinery which is expected to be in operation within a few weeks. According to report, erection of another unit will begin at once, the main building to be 65 x 210 ft.

***Harris Silk Hosiery Co.,** Springfield, Mass. This $400,000 company which was recently organized in Holyoke, Mass., has decided to locate in East Springfield, Mass., where a fireproof, brick, one-story mill will be erected from plans of Lockwood, Greene & Co., Boston. The company hopes to start manufacturing operations late in the summer. Edgar G. Harris is president and general manager and M. Hazen Chase secretary and treasurer of the company. Some machinery has already been ordered in Germany.

Berlin, (N. J.) Hosiery Co. has awarded a general contract to William F. Lotz, Philadelphia, Pa., for the erection

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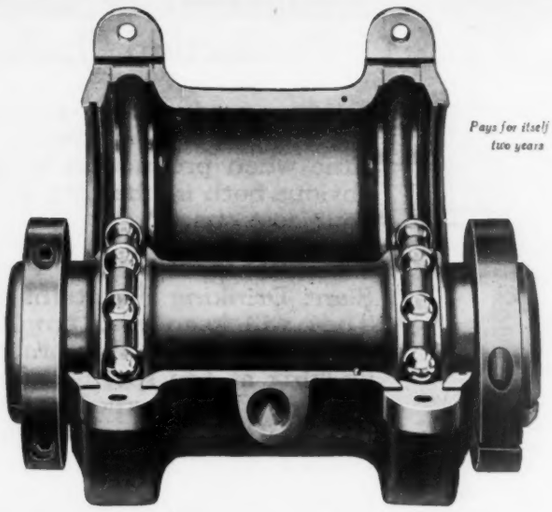

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The R B F self-aligning bearing operates on the same principle as the ball and socket joint and is therefore capable of taking care of the severest misalignment; moreover the aligning action is positive, immediate and automatic.

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Keep up production — even during the heat of summer — the time when production lulls are obvious both in the shop and on your cost charts.

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Hard Maple Flooring

Mill News—Continued

of a one-story 107 x 131 ft. mill, estimated to cost about $50,000 with machinery. C. H. Fries, Philadelphia, is architect.

Arthur W. Fox Hosiery Mills, Rockaway, N. J., have awarded a general contract to Pugsley & Stone, Dover, N. J., for a new two-story mill, 61 x 100 ft., on Main St., reported to cost close to $45,000, with equipment. Russell G. Cory, 30 Church St., New York, is architect and engineer.

***Hickory Hosiery Mills,** Lenoir, N. C. The new extension now being built for this company at Lenoir, will be one-story, 36 x 80 ft. Thirty additional machines will be installed.

***Miller-White Hosiery Mills,** Taylorsville, N. C., recently noted organized, have started construction of a one-story, 40 x 40 ft. plant, to be equipped with three ribbers, two loopers and ten circular knitting machines for the production of men's half hose. Electric power will be bought. T. H. Miller is president; J. A. Miller, vice president; G. A. White, secretary and treasurer.

***Sport-Wear Hosiery Mills, Inc.,** Philadelphia, Pa., which recently started the manufacture of misses' and children's cotton and rayon hosiery at D and Ontario Sts., has a paid in capital of $25,000. S. Richard Yusem is president and buyer, and Charles Stark is superintendent. Product is sold to jobbers. Electric power is bought.

Gehman Knitting Mill, Bally, Pa., which has been operating 100% capacity since January has added machinery to increase the production.

***Glory Knitters,** Pottstown, Pa., which recently started the manufacture of rayon underwear in leased quarters at South and Hanover Sts., have 10 spring needle knitting machines, 22 sewing machines, and dyeing equipment. They make 42-gauge goods and sell to jobbers. Thomas Tindle is superintendent.

Knoxville (Tenn.) Knitting Mills Co. has started construction of an additional story to its Mill No. 1, in which new machinery will be installed.

Charles H. Bacon Co., Lenoir City, Tenn., is making satisfactory progress in the construction of a three-story, 62 x 110 ft. addition to its plant, in which finishing machinery will be installed. The new building will be ready for occupancy July 1.

Houston (Tex.) Hosiery Mills will add 15 knitting machines to their equipment.

National Knitters, Ltd., Montreal, Que., Canada, has been incorporated to manufacture a complete line of jerseys, sweaters and athletic knit goods. Officers are as follows: T. F. Trihey, president; J. A. Clement, secretary-treasurer; T. Trihey, manager; T. Trihey, purchasing agent; H. Swackhamer, superintendent. The office is located at 58 Closse St., Montreal.

Fact and Gossip

Aycock Hosiery Mills, Huntsville, Ala. While employes of this company are enjoying a vacation this week, machinery of the plant is being thoroughly overhauled.

Super Silk Hosiery Co., Inc., Los Angeles, Cal., recently formed with a capital of $75,000, to operate a local mill, will be represented by Stollmack & Covey, 307 Pacific National Bank Bldg., Los Angeles, attorneys. The incorporators are Sidney Stamler, Huntington Park; and S. C. Siegel and Oran S. Lieb, Los Angeles.

Sterling Knit Goods Co., Cambridge, Mass., has sold its building at Sterling St. and Parkway and suspended operations for the summer. It has not yet been decided where the mill will be located.

Gropper Knit Wear Corp., Brooklyn, N. Y., has been amalgamated with the Franklin Knitting Mills, New York. Under the combine, the Franklin Knitting Mills have acquired a substantial stock interest in the Gropper business. Sidney Worms, president of the Franklin company, becomes treasurer of the Gropper Knit Wear Corp., while Harry Gropper remains its president. The identity of each company will be maintained and the Gropper corporation will utilize the styling and designing organization of the Franklin mills.

Imperial Knitting Mills, Inc., Brooklyn, N. Y., recently organized with a capital of 300 shares of stock to operate a local plant, will be represented by Albert P. Wellheim, 42 Broadway, New York, attorney. The incorporators are Jerome Meyer, Henry Stern and Abraham Katzell, 115 W. 30th St., New York.

Roff Knitting Mills, Cohoes, N. Y., will continue operations under the management of Archie A. Roff, who will take over the late Isaac Roff's interest. Fred Roff will continue in an executive capacity.

Anchor Knitting Mills, Hagaman, N. Y., are again running on regular day schedules with a normal working force.

***Norwich (N. Y.) Knitting Co.** plans to have its branch plant at Hamilton, N. Y., in operation by July 1 manufacturing balbriggan underwear exclusively. Some new equipment will be added and other changes made this month.

Seneca Knitting Mills, Seneca Falls, N. Y., are now running on full time weekly schedules with additional workers in the knitting departments.

Clover Knit Goods Co., Utica, N. Y., is now operating at about capacity in all departments.

Anchor Knitting Mills of Robert Ablett & Co., Whitesboro, N. Y., are increasing operations by enlarging working force in the knitting and seaming departments.

Princeton (W. Va.) Hosiery Mill Co. has appointed Shreve & Adams, New York, selling agents for its product.

SILK

New Construction and Additions

Seaboard Silk Mills, Elberton, Ga., awarded contract last week to Batson, Cook & Co., West Point, Ga. for construction of 46 additional operatives' houses. Robert & Co., Atlanta, Ga., are the engineers. The contract calls for completion in 90 days.

Carolina Silk Mills, Burlington, N. C., has applied for a charter with authorized capital of $500,000 with J. Spencer Love, and A. Glenn Holt as incorporators. It is reported that machinery has already been purchased for weaving silk materials. Mr. Love spent several days in New York last week and is reported

* Indicates previous mention of project.

TRADE MARK

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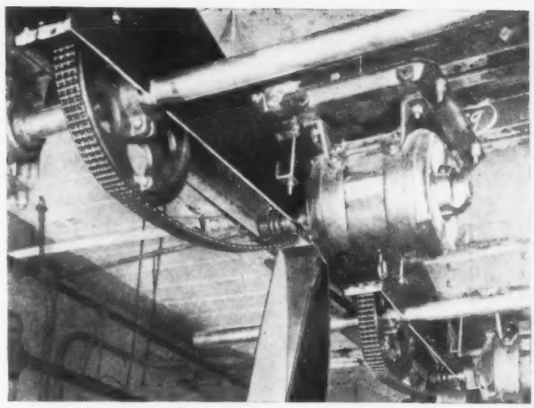

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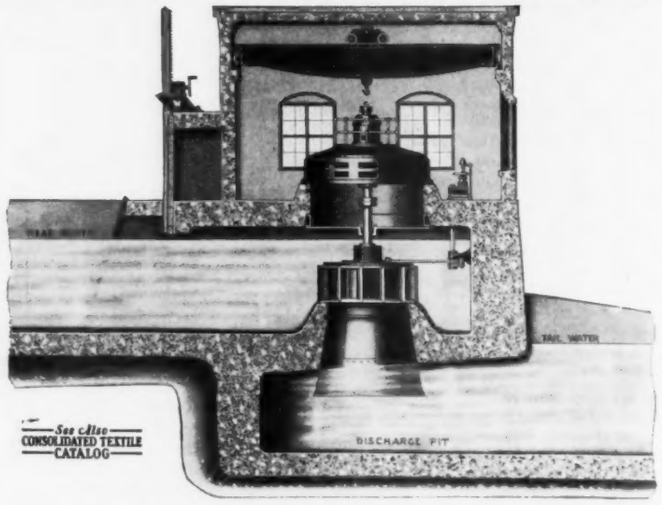

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POWELL VALVES ARE FOREMOST

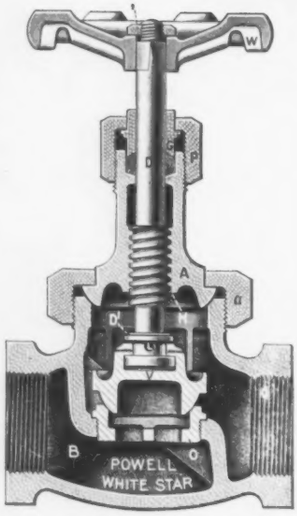


Fig. 102
Bronze, Renewable Seat and Disc, White Star Globe Valve

White Star Valves are obtainable in bronze, or iron body with bronze mountings in globe, angle, cross, check and gate patterns.

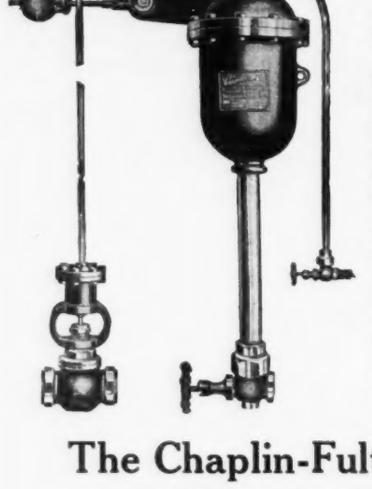
Distinctive Powell features of union bonnet construction and non-corrosive "Powellium Nickel" seats and discs insure longer service and ease in regrinding when necessary, as well as renewable features of these essential parts.

All Powell products insure the utmost in service under all conditions.

Reliable dealers with stocks everywhere.

THE WM. POWELL CO.
2521–2531 Spring Grove Ave.
Cincinnati, Ohio

Is Your Steam *Bone* Dry?



DOES your boiler supply dry steam — steam as dry as a bone? And can you depend on getting this moisture-less steam day after day — even when you force your boiler? That's where the Vigilant fits in. Although primarily a safety device, this feed water regulator holds the water at the most advantageous level. Slowly . . . automatically it feeds the boiler as the steam is made. No opportunity for water to run over into the steam pipes . . . no boiler priming or scored cylinders. Always a steady supply of steam . . . but never a drop of moisture!

Let us send you further information about this regulator. It operates without a float. *Write.*

The Chaplin-Fulton Mfg. Co.

28-34 Penn Ave., Pittsburgh, Pa.

"Not a Single Failure"

Mill News—Continued

to have placed an order for 100 looms for the new mills.

Fact and Gossip

Belding-Heminway Co., Rockville, Conn., is arranging for the early closing of its mill at Rockville, and will transfer operations to its plants at Putnam and Watertown, Conn. The company has recently disposed of its mill at Winsted, Conn., shut down several months ago, to the Mason Silk Co.

RAYON

New Construction and Additions

***American Glanzstoff Corp.,** Johnson City, Tenn., recently noted incorporated under Delaware laws with a capital of $7,000,000, will erect a large rayon plant near that of the American Bemberg Corp., according to report which states that negotiations for a site, which have been under way for several weeks, have been consummated.

DYE, BLEACH AND FINISH

New Construction and Additions

Banner Silk Dyeing Corp., Brooklyn, N. Y., have moved to their new plant at 350-360 Morgan Ave., Brooklyn, where they have larger quarters and more equipment.

***Thies Dyeing & Processing Co. of North Carolina,** Belmont, N. C., which recently awarded contract to Brown-Harry, Inc., Gastonia, N. C., for erecting a one-story and basement, 218 x 143 ft. plant of red brick construction, expects to have the building completed within two months. This new plant will have a dyeing and bleaching capacity of over 120,000 lbs. per week on tubes, cones and beams. J. E. Sirrine & Co., Greenville, S. C., are the engineers in charge.

Southern Dyeing Co., Burlington, N. C., dyers and bleachers of cotton and rayon yarns, has almost completed the removal of its equipment from its old plant. In its new quarters the company has 26,000 sq. ft. of floor space. New equipment installed includes a 500-lb. Franklin dyeing machine, a Craig-Hornbuckle combination beam and package dyeing machine, 12 Universal tube winders, and 2 high speed Universal cone winders. Production of the Southern Dyeing Co. has been doubled, amounting now to 40,000 lbs. of cotton and rayon yarns a week.

American Yarn & Processing Co., Mt. Holly, N. C., spinners and mercerizers of cotton yarns, has installed and put into operation equipment for bleaching cotton yarns.

Fact and Gossip

Sturbridge Printing & Finishing Co., Fiskdale, Mass., has been incorporated with a capital stock of $25,000 to operate the Sturbridge Finishing Co., owned by the Golding Bros. Co., Inc., New York. The temporary officers are: President, George H. Mirick, Worcester, Mass.; treasurer and clerk, Douglas Whitcomb, Worcester; vice president, Josephine M. Lindsay, Millbury, Mass.

*Indicates previous mention of project.

United States Finishing Co., Pawtucket, R. I., is arranging for the sale of its local property at the Hammond Pond site, totaling about 100 acres, to be used for dwelling sites.

***Hilsar Dyeing & Finishing Corp.,** Woonsocket, R. I. All machinery of this company has been sold to W. B. Dunn Co., Providence, R. I., new and used machinery dealers.

MISCELLANEOUS

New Construction and Additions

California Thorn Cordage Co., Inc., Los Angeles, Cal., plans expansions aggregating $10,000, which will increase the plant's output to 250,000 lbs. per month. The buildings of the plant now cover about two acres of the company's 14-acre tract.

***Orange (N. J.) Mattress Mfg. Co.,** recently noted organized with capital of $125,000, has started the manufacture of mattresses, box springs and quilts in leased quarters at 293-295 Henry St. This new firm, of which Antonio De Vincentis is president and Harry Cooperman, treasurer, has one picker. Electric power is bought.

***Kubar Mfg. Co.,** Davidson, N. C., has started the manufacture of asbestos yarns in the former Linden Mill, at Davidson. Electric power is bought. Charles E. Barnhardt is president and H. M. Barnhardt, treasurer of this new company whose office is located at 203½ S. Tryon St., Charlotte, N. C.

Fact and Gossip

Bay State Woolen Waste Co., Worcester, Mass., has been incorporated with a capital stock of 250 shares without par value to deal in woolen waste. David Fisher is president and treasurer of the company and Harry Solomon, an incorporator and director.

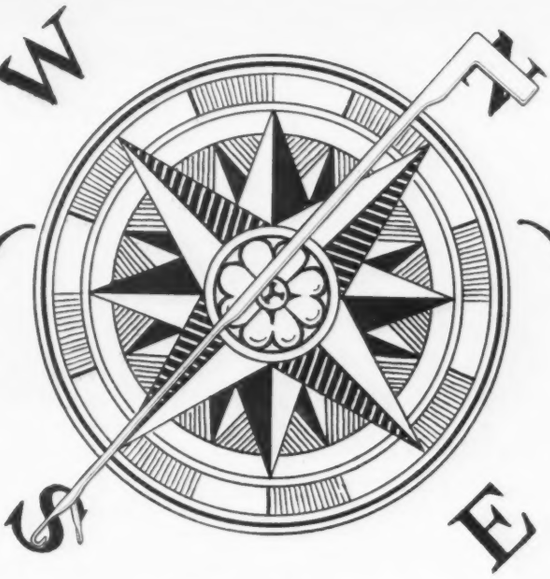
***Wollner Fringe & Cord Co., Inc.,** Paterson, N. J., formerly located at 94 Sheridan Ave., has recently started operations in new quarters at 231-237 Preakness Ave. M. F. Wollner is president and Benjamin Wollner, treasurer.

Niagara, Lockport & Ontario Power Co., Lockport, N. Y., has received permission from the Public Service Commission to take over the hydro-electric distributing system of Emory Souve in Vienna, Oneida county.

Johns-Manville, Inc., New York, N. Y., has concluded an arrangement with J. P. Morgan & Co., New York, under which the latter firm will obtain a substantial common stock interest in the Johns-Manville company. A large block of the preferred stock was acquired by the Morgan company last December. No change in the policy of Johns-Manville, Inc., is contemplated.

Tennessee Electric Power Co., Chattanooga, Tenn., has retained Lockwood, Greene & Co., Atlanta, Ga., engineers, to prepare a comprehensive survey of industrial possibilities in the section its transmission lines serve.

***Northland Mfg. Co.,** Sheboygan, Wis., recently noted incorporated, has taken over the plant of the Holman Mfg. Co. at 1910 N. 13th St., and will manufacture flannel shirts, overalls and pants, and not knitted outerwear as rumored.



The GUIDE

WHAT the compass is to the explorer so Torrington Needles are to the knitter.

They lead you straight to this goal:

High quality production, with "seconds" and frayed yarns conspicuously absent.

The red box with the green label

The TORRINGTON COMPANY

Torrington, Conn., U. S. A.

BRANCHES:

THE TORRINGTON COMPANY, CHERRY AND JUNIPER STS., PHILADELPHIA
C. B. BARKER & CO., LTD., 140-144 W. 22ND STREET, NEW YORK
LOS FABRICANTES UNIDOS, 964 CALLE BELGRANO, BUENOS AIRES

FACTORIES AT:

TORRINGTON, CONN.
AACHEN, GERMANY
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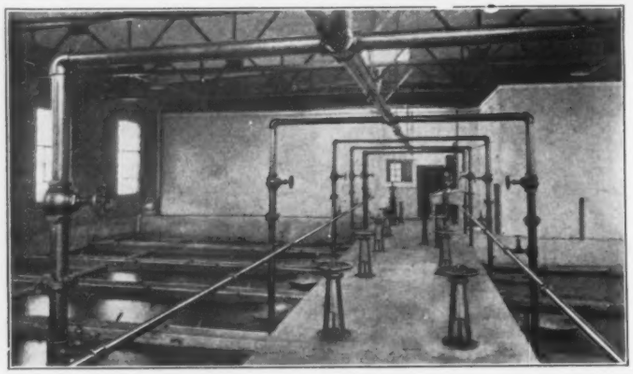
See also CONSOLIDATED TEXTILE CATALOG



Mr. Superintendent:

HAVE you some problems in your dyehouse and bleachery, Mr. Superintendent? Or will you have some problems as soon as low water periods fill your water with dirt and debris?

If you have, we suggest that you get in touch with our engineers and take advantage of the free consultation service that we maintain for your benefit.

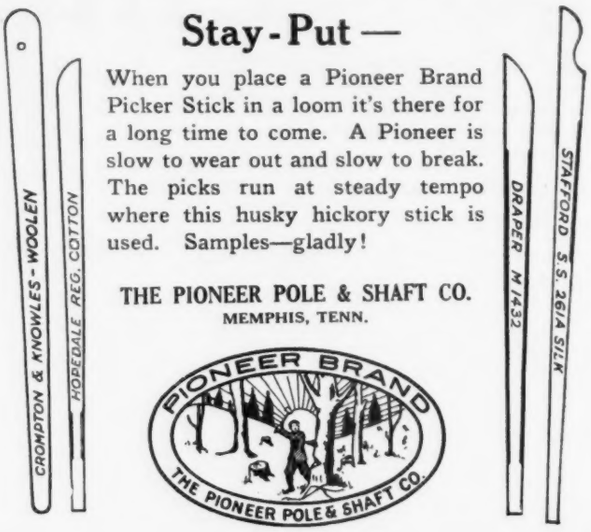
Over thirty years of experience in building water filters for the textile trade has given us quite a bit of knowledge about the problems of dyeing and bleaching. The benefit of this experience is yours for the asking.

Of course if you have no problems but just need some additional filter equipment or repairs, we know you'll appreciate the advantages of dependable Norwood Service. We are always glad to furnish catalogs, specifications and prices.

See also CONSOLIDATED TEXTILE CATALOG

Norwood Engineering Company
Florence, Mass.

HICKORY



Stay-Put —

When you place a Pioneer Brand Picker Stick in a loom it's there for a long time to come. A Pioneer is slow to wear out and slow to break. The picks run at steady tempo where this husky hickory stick is used. Samples—gladly!

THE PIONEER POLE & SHAFT CO.
MEMPHIS, TENN.

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PICKER STICKS

Made to measure
—*each Allen Blower*

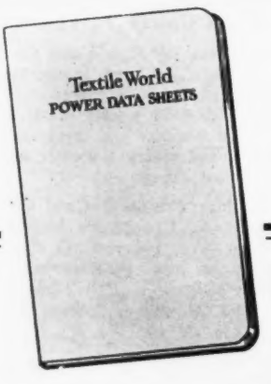
LET an Allen Steel Plate Blower handle your wool or cotton stock. You can depend on it doing its work satisfactorily — and consuming 10 to 50% less power than any stock blower. For every Allen is built to suit the existing conditions of the installation — built rugged but exact. No wonder these custom-made blowers drop operating costs so drastically!

Only after a careful inspection of the stock to be handled, is the fan wheel of the blower designed. That's why these wheels are daily transferring materials which fan engineers formerly considered impossible to convey by this method.

The blowers range in size from 30 to 140 inch diameter cases. Ten day delivery. ***Write us for illustrated circular.***

E. H. ALLEN COMPANY
22 Dorance Street, Boston, 29, Mass.

ALLEN STEEL PLATE BLOWER



Master Mechanics, Engineers, Superintendents

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Textile World
334 Fourth Ave., New York

KNIT GOODS

Hosiery Rise Needed But Not Yet Made

Cotton Yarn Situation Justifies Increases Which Agents Hesitate to Make

A good many selling agents are giving thought to the necessity of higher prices in the very near future, but there is no evidence that any one has taken any steps toward this end. Of course, this applies more particularly to the mercerized lines, for the silk end does not give as much evidence of the necessity for advances, owing to the different status of raw material. The cotton yarn market has been steadily moving upward ever since the influence of flood conditions began to make its appearance. Hosiery in which cotton yarn enters cannot be made from yarn at its present cost and sold at current prices without an actual loss. It is certain that advances will have to come if the manufacturer is to continue operation or unless there should be a radical decline in raw materials. This the majority do not expect, but on the other hand, anticipate even higher levels with which to contend.

Buyers Resist Upward Tendency

No buyer will admit that he can afford to pay any more for hosiery than he has been paying of late. All arguments about the cost of production are unavailing. And yet it would seem as though a great many realize the possibility of such advances, for agents are constantly receiving complaints that merchandise is overdue. It is funny how few buyers give any consideration to the time necessary in filling an order. The majority seem to think that the manufacturer has assumed the former function of the jobber of carrying stocks for the benefit of the trade. As a matter of fact a great majority of manufacturers have adjusted themselves to the new order of buying with the consequence that when an order is placed it has to be made up instead of being taken from stock. Manufacturers have had their experience in accumulating merchandise in the hope that they could eventually sell it at a profit; and they are determined they will not repeat this experience.

In the line of fancy half hose, there is continued demand from the buyer for something new. This is getting to be a more serious problem all the time. Manufacturers are at their wits end frequently to bring out anything which they can conscientiously declare is new; and yet they realize that novelties in fancy hose are the only things that will sell. But novelties are short lived and must be replaced by other novelties.

In this connection the complications

(*Continued on page* 107)

The Jobber's Buying Problem

Underwear Agents Resent Inquiry as to Selling Policy

REFERENCES were made in these columns last week to a questionnaire received by underwear agents and manufacturers regarding their policy of selling not only the retailer, but also the chain store and syndicate buyers. Considerable talk has developed in the market regarding the warrant for such communications in view of the attitude of the wholesaler in respect to his purchases. It is probable that a good deal more will be said in private conversation—especially if it is promised that the individual, expressing his opinion, will not be quoted—than would be written in reply to the questions that are asked. Selling agents are fearful of losing business at any time and they do not relish having a ready-made weapon, which they may furnish the buyer as an excuse for declining to do business.

An Old and Sore Subject

The question whether or not manufacturers and their sales agents should sell the jobber exclusively, is no new topic. At every convention of the wholesaler the subject is brought up and there are usually expressions of opinion on the part of the seller that he desires to cooperate in every way possible to which he usually adds many high sounding phrases which may or may not mean anything. In the meanwhile the subject is just as much up in the air as has been the case for twelve or fifteen years. As long ago as this the wholesalers commenced to campaign against selling agents doing business with the so-called "Case Lot" distributors. Also at about the same time there was an attempt to get manufacturers and their representatives to agree to sell no retailers doing less than a million dollars worth of business a year Both of these matters have been dropped, the first because the jobber himself is selling the "Case Lot" dealer in a good many instances; and the second because the number of department stores doing a business of a million dollars or over per year has increased to such proportions that if this stipulation were made it would mean permission to sell a large majority of the retail trade. Now the attack is centered largely upon syndicate buyers, chain stores and mail order houses.

The Jobber's Own Problem

The opinion is more or less freely expressed, although without permission to use names, that the jobber has brought the current condition upon himself and that he has little warrant in passing the buck to the primary market. In the first place it is contended that in view of the large purchases of chain stores, mill selling agents could not, if they would, disregard the offers of these buyers to purchase their merchandise. If the business of the chain store is economically sound—and few will attempt to disprove that it is—the selling agent declares that the jobber has no right to dictate that this source of outlet should not be cultivated by the selling agent. Many mills are run with a certain basis for the future on the business received from chain stores, which in the aggregate, amounts to millions of dollars a year. No such basis as this is offered by the jobber.

It is true, as many point out, that the chain store business may be overdone. In fact, there seems evidence of this condition becoming generally the case in many localities. This may result in consolidations and in the elimination of the weaker units. Whatever the development in this connection, it is not contended by those who have made a study of the situation, that the principle of the chain store or syndicate buying is a wrong one. It may interfere disastrously with the business of the small retailer in a given community. But if the latter cannot compete, it will mean a survival of the fittest and he will have to pass on. Certainly to-day the chain store does not show any likelihood of passing out of the picture, but rather gives evidence of steady and healthy growth.

Does the Jobber Function?

Those selling agents who have received letters regarding their selling policy, are inclined to ask what the jobber is doing, or is prepared to do, on his part, to warrant an expression of policy from the manufacturer. While there are always exceptions to every rule, the knit goods selling agent to-day claims that the jobber, or, as he prefers to be called, the "wholesaler," will not take any comprehensive assortment of the average manufacturer's line of underwear. He buys price, and as a consequence takes a few cases of the cheapest numbers in an agent's line and then goes to some one else and duplicates the experience with him. As far as novelties or better class goods are concerned, he shows little interest—even though the attempt is made to persuade him that the retailer would be interested in this class of merchandise and that they could be sold by both jobber and retailer at a price that would give them both a fair profit. Then, too, the jobber, for reasons best known to himself, does comparatively little business with the large department stores in his own community. This is believed to be partly due to the system of sales by general salesmen for the house and that departments such as hosiery and underwear, instead of being run as specialty shops in themselves, are represented by these salesmen carrying general lines of merchandise who concentrate upon the things which they can sell with least resistance. The result is that frequently samples of knitted goods lie neglected in the salesman's sample trunk to the detriment of the department they are supposed to represent.

Working With Retailer

The argument would seem to have considerable basis that the jobber's problem is to be solved by increasing contact with the retailer, big and little, and by a willingness to work out a plan, including service, by which it may be necessary at times to sell the retailer at a small margin of profit, just as the manufacturer is obliged to do. If it is necessary to attract the large retailer with a five per cent basis, could this not be done when there is sufficient volume offered? This is the argument of the manufacturer's representative who is often compelled to reduce his margin, and who feels that a similar procedure, on the part of the distributor, would accomplish results.

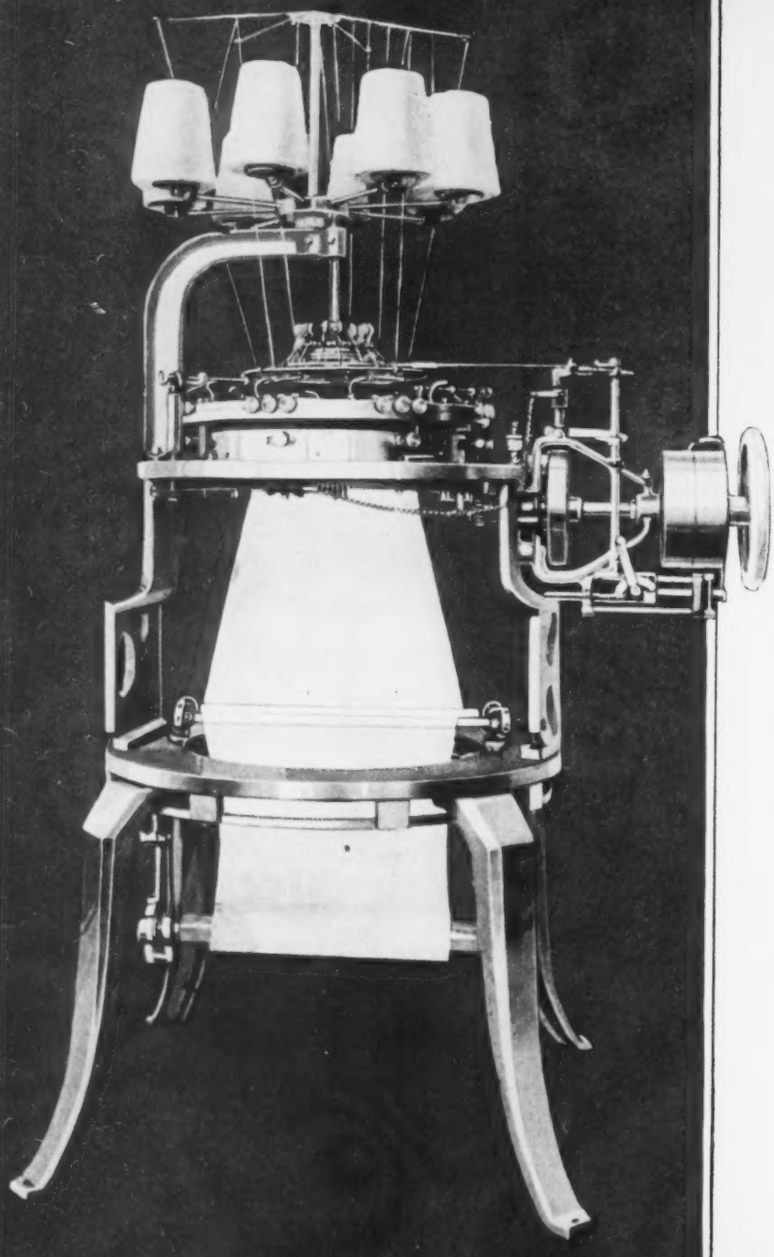
Another feature which enters into the problem is the question with regard to the sale of "seconds." Is there any appreciable outlet for any such merchandise in the jobbing field? If there is the majority of sales agents do not know it; and yet if they were to adhere strictly to the understanding that certain wholesalers would have them make, they could not get rid of their stock of seconds. Jobbers tell the selling agent all too plainly they do not deal in seconds and they get enough of them in their regular orders.

Case of Desperation

Sales agents contend that the reappearance of these questionnaires indicates the desperate condition in which the wholesaler finds himself. While a majority believe that no more will come of the requests for a declaration of policy than has resulted from similar attempts in the past, they do admit that the jobber is the only one that can develop a remedy for the situation. He has it in his own hands to improve his situation, but it is argued this will never be done by asking that all concessions be on the side of the selling agent and none by himself.

Cheap Heavy Ribs Withdrawn

The feature of the market last week was the announcement by two of the



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We have issued a new edition of the complete and informative book, "The Science of Knitting." Price $2.00.

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SPRING NEEDLE BODY MACHINE

Knit Goods—Continued

leading southern manufacturers that they had withdrawn their lines of cheap heavy-weight ribs, while another producer has increased his price on this class of merchandise 25c a dozen. This, of course, has been expected for some time, and many have wondered why these manufacturers should continue to sell this class of underwear at the figure quoted at the beginning of the season when costs have so materially increased. It is probable that if these manufacturers had been able to forecast the development of the raw material market, they would never have brought out these cheaper lines which did so much to confuse the situation and which could not have been a profitable venture at any time. In addition it is believed they detracted materially from the interest in standard goods and in their distribution.

Requests continue to be received for prompt delivery of balbriggans. When selling agents declare their inability to make deliveries, even in July, it is hard for the buyer to understand the situation. It is believed one of the principal reasons for the increase of inquiries received on this class of merchandise, is the development of the athletic shirt worn in combination with running trunks. It is, perhaps, not exaggerating to say that the majority of the public have not known the significance of the knitted athletic shirt and confuse it with the nainsook garment. With the advertising that has been running of late on knitted athletics, the public has become aware of the possibility of this garment and it has been made knitted underwear conscious.

No Hosiery Advance

(*Continued from page* 105)

which arise from the appointment of more than one selling agent for lines of fancy hosiery, have recently been brought to the attention of the writer. More than once it has been declared, in the case of a divided account, that the buyer has notified one selling agent that samples which he was offering had been offered him by other agents at a different price. This meant not only that the buyer was dissatisfied with a second set of samples as being something not new but also that he was decidedly upset as to the price situation; and, consequently, was not willing to place his order.

Certain agents are confident of the increasing popularity of women's fancy hosiery. Lines which have been shown for fall have been received with considerable enthusiasm; and if all the statements of the jobber are to be believed a very satisfactory volume of business on this type of stocking is to be expected. Wool and fiber combinations may bulk large in this type of goods and certain attractive patterns are certainly deserving of widespread attention.

Little Change in Silks

Little, if any, improvement is noted in the demand for full fashioned silk. Buying is only moderate, without any enthusiasm or any evidence of need for immediate replenishment of stocks. Here, too, the price situation is more or less uncertain. Selling agents have given up guessing about the future of raw silk; and with many there is a feeling that their purchases of raw material do not look very satisfactory, in view of past events and the possibility of the future. It was hoped, not so long ago, that the raw material market had become practically stabilized, but this view is not as prevalent today; and the future does not seem as assured as was the case a few weeks ago. Broad silk manufacturers are not taking the amount of raw material which they did, and the effect of this lack of consumption may be appreciable upon the whole market.

Export Trade May Help

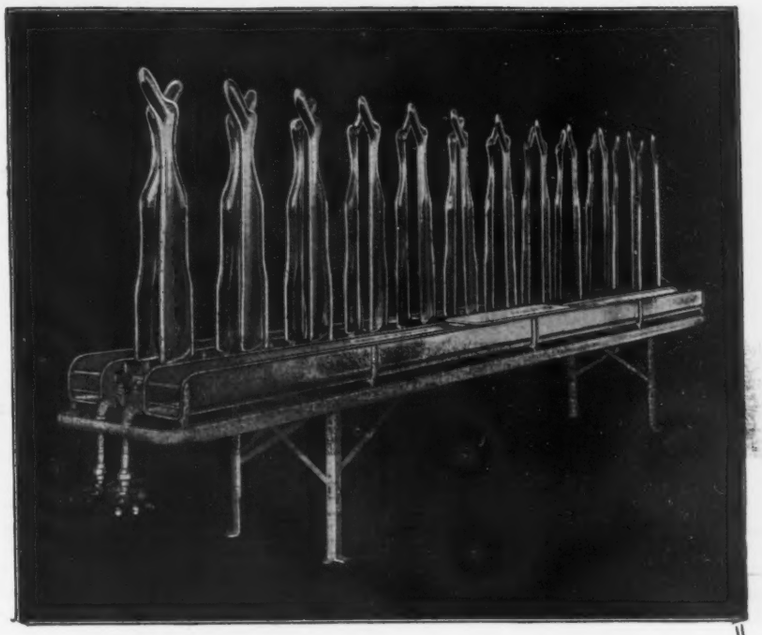
The question has been asked in a number of instances of late whether it is not time to take the export situation more seriously and spend time and effort to secure foreign business. It is believed that increase in this direction would do more than anything else to relieve the present situation and prevent a worse condition in the future. It is realized that there is an immense amount of detail and complicated ramifications in connection with the development of export business. Mills are not anxious for this type of order, but it may be that their situation will necessitate it.

Underwear Production in April Shows Small Decrease

WASHINGTON, D. C.—Knit underwear production in April showed some decrease from otuput in the preceding month and also from April, 1926, according to monthly report of the Department of Commerce compiled from the returns of 150 establishments. Men's cotton shirts and drawers were the only items in which April production was larger than in March. The output of women's union suits and of children's and infants' underwear, all kinds, was slightly larger than April, 1926, production.

New orders received during the month by 150 establishments were considerably smaller than in March, amounting to 912,977 dozens, as compared to 1,289,394 dozens. Shipments totaled 991,958 as compared to 1,153,201 dozens at the end of the month from 2,609,531 dozens March 31.

The volume of new orders was considerably larger in April than in the corresponding month of last year. The total received during the month by 145 establishments was 928,711 dozens as compared to 761,390 in April, 1926. Plus unfilled orders on hand April 1, the total was 3,505,492 dozens, as compared to 3,485,801 dozens a year ago. Shipments during April amounted to 91,883 dozens, as compared to 979,265 in April last year, and unfilled orders totaled 2,495,656 dozens April 30, against 2,486,499 dozens on the corresponding date last year.



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The Most Widely Used Method of Hosiery Finishing in the World

1. The only Form with which the Paramount Patented Holder can be used. This Holder produces even lengths and saves fabric.
2. The only Form with sharp edges for producing pronounced and perfect creases assuring flat lying fabric.
3. The only Form with special oval construction and patented thick toe to eliminate ears and puckers in the stocking.
4. The only Form with Patented Toe-Grooves to insure rapid boarding and perfect alignment of the toe gores.
5. The only Form made in one piece and of aluminum, insuring long life and permitting reasonable exchanges. Aluminum can be recast when change of shape is necessary. This metal will not stain or corrode and it takes a smooth high polish so essential in finishing Chiffon hosiery.
6. The only Form with three types of Grooves for perfect alignment of seams for boarding full-fashioned and mock-seamed goods.
7. The only Form mounted on All-Metal Table with Patented Removable Aluminum Troughs, facilitating changing of forms and cleanliness. Troughs are made with rounded corners eliminating possibilities of pulling threads.
8. The only Form equipped with Angle-Base Attachment enabling operative to see both sides of the stocking without moving the form. It facilitates the stripping operation and produces improved finish of the tops.

Paramount Equipment furnished on sale or rental basis.

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PARAMOUNT TEXTILE MACHINERY CO.

Chicago, Illinois

Perfect Split-Foot Product with Pointed Heel Reinforcement

There is constant satisfaction in a knitting machine which produces perfect work. You can buy our Split-Foot Pointed Heel machine with the full confidence that it will knit automatically a perfectly tapered reinforced heel, without leaving any unsightly fringe, or trimmed, or ragged edges resulting from the usual floating yarns — a product of beauty and endurance exactly as shown in the above cut.

Users of the "Banner" Split-Foot Pointed Heel machines are absolutely free from any infringement.

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New York Sales and Show Rooms
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Southern Office
James Bldg., Chattanooga, Tenn.

Philadelphia Sales and Show Rooms
Colonial Trust Bldg., 13th and Market Sts.

See also
CONSOLIDATED TEXTILE CATALOG

Obituary

Charles O. Herbert

Charles O. Herbert, of the Herbert Hosiery Mills, having plants at Conshohocken and Norristown, Pa., well known in the hosiery and wool trades, having for many years been in the wool business in Philadelphia, died May 30, at the Methodist Hospital, Philadelphia, following an operation. He was 56 years old. After leaving the wool business several years ago, Mr. Herbert started a mill at Ontario and D Sts., Philadelphia, manufacturing infant's hosiery. Early last year he purchased an additional mill at Norristown. Mr. Herbert was one of the most successful hosiery manufacturers in this section of the country. He was born in Philadelphia March 11, 1871, the son of N. B. and Harriet V. Herbert. Mr. Herbert was president of the Doylestown Driving Club, a member of the University Lodge of Masons, the Mystic Shrine, Elks and the Penn Athletic Club. He is survived by his son Leon F. Herbert, who is connected with the Herbert Hosiery Mills, his widow and two brothers.

Nelson R. Gilbert

Nelson R. Gilbert, prominently identified with the Gilbert Knitting Co., Little Falls, N. Y., died May 29 following an extended illness. He was 71 years old coming from a family regarded as one of the pioneer entrants in knit goods manufacturing in the Mohawk Valley. He served several terms as mayor of that city and in addition to his duties as a director of the Gilbert Knitting Co. he was also identified with the Little Falls Power & Light Co. and several commercial institutions. He was a graduate of Columbia University. With his brother, the late Joshua Gilbert, he was largely responsible for the founding of the Gilbert Knitting Co.

C. W. McCord

Charles W. McCord, aged 62 years, head of the McCord Co., cotton brokers of Louisville, Ky., and proprietor of the Grahampton (Ky.) Mfg. Co., makers of coarse cotton yarns, died suddenly last week at his home in New Albany, Ky. Mr. McCord died in the house in which he was born. His firm had been established by his father, Robert G. McCord. He is survived by his widow, two sons and a sister.

Howard C. Tinsley

Howard C. Tinsley, a former official of the Massachusetts Cotton Mills, Rome, Ga., died recently at Montevideo, Uruguay, where he was American vice-consul. Mr. Tinsley went to Rome some 25 years ago, entering the employ of the Massachuestts mills and rising in a short time to a responsible position. When war was declared, he entered the service, and at the close of the war he entered the consular service and was stationed at Montevideo.

William H. Nearing

William H. Nearing, prominent in the wool goods business a decade ago, died at his home in New York last week. He began his business life in the woolen industry with Cooley, Turnbull & Co., with whom he was associated for many years. Subsequently he joined forces with Duval, Cone & Terhune, traveling West where he was one of the best known salesmen in the business. In May, 1907, with W. V. E. Terhune, he formed the partnership of Terhune, Nearing & Co., retiring from that firm about 12 years ago. Upon his retirement the firm of Terhune, Yereance & Co. was formed, which later became Terhune, Yereance & Wolff. Upon his retirement from the woolen business Mr. Nearing spent several years on the Coast. Returning East he devoted himself to the sale of knee pants with S. Shapiro, and still later as a salesman in the woolen business with Gus L. Rosenberg. Recently he had spent considerable time in Florida.

Patrick J. Hurley

Patrick J. Hurley, the dean of Fall River's cotton and cloth merchants, died at his home there on May 28 in his eighty-third year. He was born in Boston and went to Fall River to enter the textile business shortly after the Civil war, becoming associated with the Tuttle & Milne office, of which he eventually became the head. He retired from active business about three years ago but continued to maintain an interest in the Citizens Savings Bank, of which he was a vice president, a trustee and member of the investment board. Mr. Hurley was of the old school type of business men and exercised such judgment in the conduct of his business as to make his opinion much sought.

James H. Webb

James H. Webb, aged 59, president of the Eno Mills, Hillsboro, N. C., died in a Durham hospital, following an illness of several months, which became critical about a week ago. Mr. Webb was born in Hillsboro in 1868, and lived for the last 30 years in Hillsboro, receiving his education in the old Nash and Pollock seminary, which played an important part in the early educational history of the State. He began his cotton mill career when a boy and worked his way up. He held the office of vice-president of the American Cotton Manufacturers' Association. In Masonic circles he held the highest office in the grand lodge, and the Masonic fraternity was guard of honor at his funeral, May 25.

G. A. Meckel

G. A. Meckel, superintendent of Wm. B. Scaife & Sons Co. Oakmont, Pa., manufacturers of range boilers, pressure tanks and water softening apparatus, died suddenly at the home of his daughter in Frederick, Maryland, on May 16. On May 26 of this year Mr. Meckel would have completed 64 years of continuous service with Wm. B. Scaife & Sons Co., 51 of which he served as general superintendent of the mill. During his association with the company he developed and perfected many improved methods in tank construction. It is believed that his length of service sets a record for continuous employment by any one company in the State of Pennsylvania if not nationally.

William McK. Morris

The death of Wm. McK. Morris of Groveville, N. J., on May 27, is announced. Mr. Morris was treasurer of Morris & Co., cotton duck manufacturers and makers of mill baskets. Hussong Dyeing Machine Co. and the National Fuel Cleaner Co., all operated from a central office in Groveville. He was born Sept. 16, 1861. After graduation from college he became associated with his father's interests at Groveville and has been actively identified with the varied developments of these interests at Groveville.

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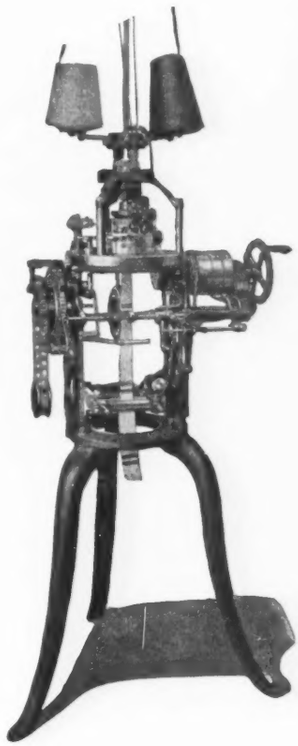

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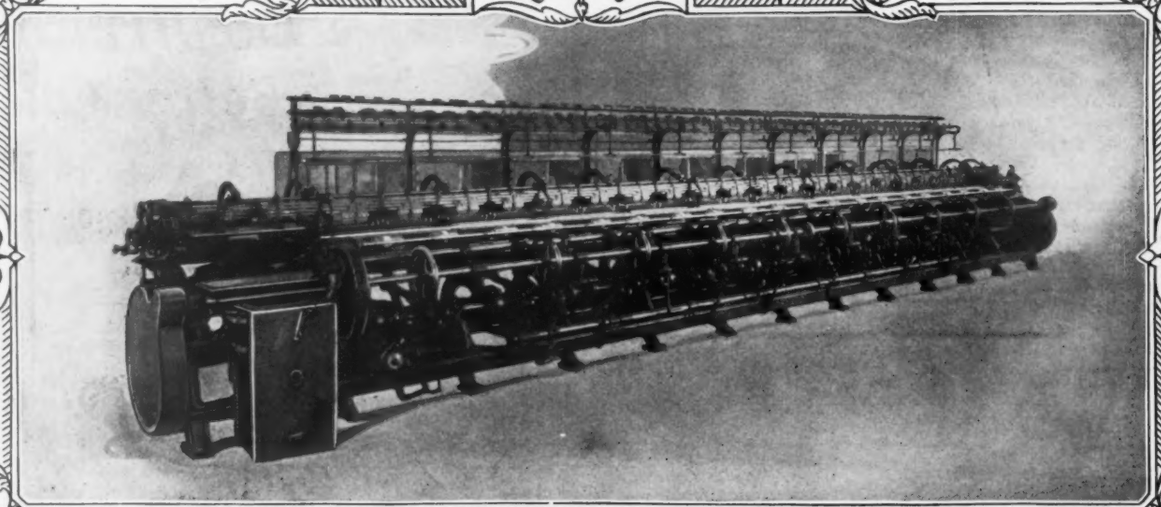

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Talk with the retailer who knows quality, value and popular demand —

Ask the hosiery manufacturer who is eminently successful —

Back of it all is the Reading Full-Fashioned Knitting Machine.

TEXTILE MACHINE WORKS
Reading, Pa.

As far as well dressed women are concerned there *is* no other stocking but Full-Fashioned.

See also CONSOLIDATED TEXTILE CATALOG

The READING

FULL FASHIONED KNITTING MACHINE

FABRICS

Wool Goods Men Clean House

Hope for Profitable Basis and Try to Stop Leaks

ALTHOUGH there is little vigor to the present business in wool goods, selling agents are holding fast to their plans for cleaning house. Many of them now believe that many of their trade's hardships have been due to causes arising within the industry itself. For the time being they are taking the buyer as less to blame than heretofore.

It is obvious that if slightly higher prices on goods could be obtained mills might run even on a 70% basis or less and yet make money. The difficulty all along has been that prices were figured at cost on a capacity basis and orders have never been sufficient to achieve that scale of operations save in a few exceptional instances. It does not seem likely that 5 or 10c a yard added to present prices would affect the total yardage absorbed by the clothing trades. It might, however, influence in what channels the business would be placed and it is apprehension of being left out in the cold that has made many mills quote their goods below cost.

If higher prices are not to be generally experienced this season at least some of the minor leaks may be stopped up. In this category comes the distribution of reference samples. It is believed that buyers have gone too far in their request for these samples without the placing of a business of sufficient size to absorb their cost.

There is also much waste in the preparation of new lines, though it will be hard to economize here in a season where great style variation is one of the prime attractions to the buyer. A season or two ago there was much talk of the "window dressing" quality of fabrics, and this characteristic remains of great importance. The buyer wants something that will show off well and that will be as unusual as possible without being grotesque. Mill stylers consequently scour many fields for ideas, and eventually unsalable styles are made up in sample form on the chance that some buyer might take an interest in them. Many color schemes also are tried out which fail of hitting the mark. Estimates of the amount of money involved in the style preparation for several of the market's big organizations run to large figures. Perhaps some future day may see some form of cooperation with the buyer that will permit a saving of the waste in this field.

* * *

Women's wear: The American Woolen Co. last week advanced the prices of Venise and Dewbloom 25c and 12½c per yard respectively. These are two of their most popular staple coatings. Venise has been held in high regard by distributors for several seasons, and when opened not long ago for the fall season the price was lower than the ruling figure in the secondary market. At that time this was exceptional because the trade was depressed and many lines were being quoted below the mill figures. Of course the mill price includes the regular discount and the outside trading price is quoted net. It is also understood that the American Woolen Co. is stipulating that examination of the goods must be made within fifteen days of delivery on late duplicates to prevent speculation and unwarranted returns. In the general women's wear field there is some interest in flannels, kashas and twills for coats, while the rest of the market remains extremely dull.

* * *

Men's wear: The flow of duplicate orders for the fall season is erratic. Some houses find continued interest while others are experiencing a complete lull. The week end holiday brought added dullness and the majority of houses were closed all day on the Saturday before Memorial Day. Last minute business in spring goods is disappointing. The weather has been against the movement of spring garments at retail and some clothiers find that their output is accumulating. Tropicals, however, are in good request. Preparations proceed for the new season in tropicals which may be opened at the end of this month or early in July. It is hoped that the opening of general lines for spring 1928 may be delayed till late August or early September.

Oregon Wool Selling Nears Season End

PENDLETON, ORE.—Wool sales in third week of May totaled 205,000 lbs., and brought prices of 27 to 30c a pound. About 875,000 lbs. of wool have been sold to eastern and coast buyers this season and approximately a million pounds total should be reached before the end of the buying period. Shearing is now completed and sheep are being headed for summer ranges.

Wm. Spink Co., Philadelphia, reworked wool and extracts, carbonizers, etc., has awarded contract for the construction of a garage at Nixon and Leverington Sts., Manayunk.

Sharp Upturn in Many Cottons

Gray Goods Gain and Colored Goods Are Following

THE cotton goods market has turned more bullish than conservative members of the trade had hoped would be necessary. Under the stimulus of a sharp upturn in raw cotton and widespread buying on the part of manufacturing and distributing agencies, higher prices are coming into effect all along the line. Merchants who at the beginning of May thought that that month would witness the usual spring lull which had failed to develop as usual in March, have had their anticipations completely upset.

It is estimated in advance of actual figures that May has recorded quite as large sales of gray goods as any of the months so far this year. Large buyers, who themselves may have expected stability when May began, saw that they were facing a forlorn hope when new crop news put the raw material on a higher basis with the passing of each week. That these prominent buyers came to the conclusion that to wait was to pay higher prices, is evidenced by the large contract business accomplished, with many deliveries running through September and some orders covering even the last quarter of the year.

A number of lines of colored goods have been advanced ½ to 1c per yard, and others, so far unaffected, are on the verge of action. The advance of more than 4c in cotton places some lines below replacement cost and their prices are only possible because mills were sufficiently farsighted to lay in a stock of cotton several months ago before the rise. Despite the acknowledged justification of a price of 16½c for cotton, merchants recognize that higher goods prices may prove a check on distribution, and will certainly render difficult accomplishment of some of the new uses for cotton fabrics which were encouraged a few months ago by the exceptionally low levels to which the market had fallen. It is not unlikely that until another large crop or some other influence makes cotton cheaper, some of these plans will have to be laid aside.

* * *

Denims: These goods have been advanced ½c per yard and the current basis for 2.20s is now 15c. Even such a figure may be regarded as low on the present cotton basis. Overall manufacturers appear capable of using a large yardage through the rest of the year.

* * *

Chambrays: Business in these lines is moving well and work clothing manufacturers are supporting the market more freely than for several seasons.

* * *

Flannels: Representative manufacturers have advanced prices ½ to 1c per yard during the last ten days. Mill operations are reported to be active and buyers are interested in deliveries up to the end of the season. Hickories, cotton coverts, etc., have also been advanced.

* * *

Ginghams: Although at mid-week no general action had been taken to advance ginghams, it seemed only a matter of days before such action would be taken. Mills have endeavored to stabilize this branch of the market and they will not be stampeded into an advance unless absolutely necessary. Already minor advances have been declared.

* * *

Percales: Percales and other printed goods seem also on the verge of higher prices and buyers have been actively operating to take advantage of present quotations. The only sluggish side of the market is to be found in a few seasonal wash goods which have been held back by the continued cold weather.

* * *

Print Cloths: Around the holiday this branch of the market was quiet but very strong. At mid-week contracts for 64 x 60s were available at 7¼c and some business was done. No more were to be found for 7⅛c. On 60 x 48s, 6¼c was the figure for both contract and nearby.

* * *

Heavy Gray Goods: Sheetings have been fairly active with 37 in., 4-yard, 48 square selling at 7¾c and 7⅞c for

Cotton Goods Quotations

	June 1	May 25	June 2, 1926
Spot cotton, N. Y....	16.95¢	16.50¢	18.85¢
Print Cloths			
27- in., 64x60, 7.60..	5¼-5½¢	5⅛-5¼¢	5⅛¢
38½-in., 64x60, 5.35..	7¼¢	7⅛-7¼¢	7½¢
39- in., 68x72, 4.75..	8¼-8½¢	8⅛-8¼¢	8½¢
39- in., 72x76, 4.25..	9¼¢	9-9⅛¢	9½¢
39- in., 80x80, 4.00..	10⅛-10¼¢	10¢	10½¢
Brown Sheetings			
36- in., 56x60, 4.00..	8¼-8½¢	8-8¼¢	9-9⅛¢
36- in., 48x48, 3.00..	9¾-9⅞¢	9⅝-9¾¢	11-11⅛¢
37- in., 48x48, 4.00..	7⅞-8¢	7⅝-7¾¢	8¼-8⅜¢
Pajama Checks			
36½-in., 72x80, 4.70..	8-8¼¢	8-8¼¢	9¼-9⅜¢
36½-in., 64x60, 5.75..	6¼-6¾¢	6¼-6⅝¢	7½-7⅝¢
Miscellaneous			
Drills, 37-in., 3 yd....	10¢	10¢	11⅜¢
Denims, 2.20s.....	15¢	14½¢	*15¢
Tickings, 8 oz.....	18½-20¢	18½-20¢	*19½¢
Standard prints.....	8¢	8¢	9½¢
Eastern staple ginghams, 27-in.....	9¢	9¢	9¢

*Nominal.

New!

The foot of an ordinary stocking is made to fit merely by pulling it into shape when the stocking is put on. In order to obtain a full fashioned foot which will accurately and more comfortably fit the human foot, the stocking must be knit instead of boarded to shape. This can be accomplished on the Standard "H" Hosiery Machine with Hirner Attachment.

Compare the two small illustrations above,—the one on the left shows an ordinary foot, while the one on the right shows the Hirner Foot. Also, note that in the Hirner Foot, the transfer line is maintained in a low position so that it is not visible above the top of low shoes. The large illustration above clearly shows the improved appearance which results.

Write for information.

See also CONSOLIDATED TEXTILE CATALOG

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2B Harmony Winder
No. 27 F F

Just as "Lindbergh, the Great", left Roosevelt Field and glided over to Paris, meeting all obstacles, and gaining the Victory over all competitors so the

"ALTEMUS HARMONY WINDER"

would like to leave our Factory and glide over to your Plant and prove to you that we have overcome all obstacles and gained the Victory over our Competitors in the Up to Date Full-Fashioned Hosiery Mills!

It has been received Royally by Endurance Knitting Co., Regina Silk Knitting Mills, Blackwood Silk Hosiery Co., Propper Silk Hosiery Co., Ipswich Mills, Brownhill & Kramer, Largman Gray Co., Franklin Hosiery Mills, Miller Smith Hosiery Mills, Lansdale Silk Hosiery Co., Wallace Wilson Silk Hos. Co., Penfe Hosiery Co. (formerly Mock-Judson Voehringer Co., Inc.), Berkshire Knitting Mills and many other distinguished plants.

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Established 1885
WINDERS SPOOLERS WARPERS
Textile Machinery
BEAMERS & KINDRED MACHINERY
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Fabrics—Continued

contract and some holders asking up to 8c. In osnaburgs the 30 in., 7 oz., part waste fabric has been moving at 10c. Drills are well sold with 30 in., 3.25-yard goods scarce on the spot at 9c. Higher prices are being asked for the general line of ducks in a number of agencies.

Between Seasons Quiet in Silks

Spring Season Tapers Off With Some Carry-Over

BUSINESS continues to be done in the broadsilk market but the situation has well been described as "dog eat dog." If ever competitive conditions existed, they exist today. Nearly every manufacturer is out to clean out such holdings of spring goods that he has in stock and prices have now reached levels that is forcing the conviction on many houses that were formerly content to continue making up merchandise in the hopes of a change, that it would be cheaper to curtail. Many have already done so and others will do so shortly.

Mills running full at the present are doing so on fall goods. Satins have been booked for June, July, and August delivery at actual cost in some cases where the mill preferred to keep working and hold their help, rather than shut down entirely. Prints for summer consumption are having a good call but even here some complaint is heard of close prices being made on seasonable goods that ought at this time to bring a fair profit.

——*—

Georgettes: Demand is tapering off and some reports are heard of further price cutting. This applies particularly to the cheaper grades of both weighted and pure dye goods which employs just about the lowest grade of raw stock that can possibly be used. It has sold through the season for $1.22½ up to $1.27½ which was nothing to rave about, but at least did permit the mill to exist. Some houses last week stated that they had heard of sales as low as $1.15. While this could not be confirmed, it is not beyond the bounds of possibility.

* * *

Crepe-de-chine: Market rather quiet and prices unsatisfactory. Cheaper grades of Canton goods are again in favor.

* * *

Broadcloths and Tub Silks: Selling actively over the counter considering the difficulties of the weather but wholesale market has quieted down. Radium scarfs are understood to be having a big call particularly with neat and attractive designs.

* * *

Prints: Summer prints in dots and flowered designs are being taken in good quantities by cutters. Prices do not approximate, however, what the silk house should get for seasonable and speculative goods of this character. Spring designs are quieter and retailers are understood to be picking up bargains where they can get hold of them.

* * *

Silk situation at a Glance: PRODUCTION: Decreasing.
DEMAND: Smaller.
STOCKS: Difficult to estimate.
RAW SILK: Prices steady; stocks smaller.
SENTIMENT: Depressed.

Burlaps Are Quiet

Buyers Are Still Waiting for Stimulus to Buy

The burlap market has been quiet with not much change in prices. Buyers are holding back for a clearer view of the situation or to await receipt of better business on their own products.

The recent price movement of burlap has been directly opposed to that of cotton goods. While the latter have advanced steadily during the last four weeks, burlaps have been on the toboggan.

Spot and nearby prices on heavyweights are about 8.75c and July-September shipment from Calcutta may be had at 8.65c. For light weights the spot and the nearby basis is 6.75c and July-September shipment is available at 6.70c.

There appeared no reason to expect much change in the market, though the figures on shipments for May from Calcutta which will be available in a day or two may be effective in forming market sentiment.

Autumn Leaf Colors Stressed for Fall

Various color schemes are assembled in the fall, 1927, color card issued by The Textile Color Card Association. The rich tints which Nature paints her autumn foliage with are grouped under "Autumn Leaves"—bright reds and golds and chestnut browns. The delicate pastel shades worn in the palace of Versailles during the reign of Louis XIV are listed under "Opera Tints." Soft, feminine colors which Ninon de Lenclos or the Marquise de Sevigne might have worn are called "Debutante Pink," "Twinkle Blue," "Opera Mauve" and "Rose Soirée." The great dames who danced at the court of the king liked to pose a darker shade over a light one, such as "Tourmaline Blue" over "Debutante Pink" or "Opera Mauve" over "Eventide Lavender," and "Liqueur Green" over "Mellowglow Yellow," or "Aquagreen" over "Ibis Pink." The new fall card carries 80 shades.

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The Tri-Towns (over 10,000 population), located on the Potomac River — 950 feet above sea level — at the foot of the Allegheny Mountains in two states, Maryland and West Virginia, offer a logical point for a Textile Industry.

Rail facilities excellent, main lines of the Baltimore & Ohio, Western Maryland, and Cumberland & Pennsylvania.

Coal, natural gas, electric power, pure water. Labor ample, high class American-born, surplus female labor. The splendid climatic conditions with cool summers are assets for labor efficiency and living conditions. Close proximity to raw material supply and located midway between East and West markets makes this a good distributing point.

Several available factory sites.

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New Year
New Methods
New Profits

1927 is here
1926 has gone

Why don't you let us go over your mill and tune it up so that you will KNOW that you are getting the UTMOST out of it for the coming year?

It will not obligate you in any way to talk to us. Won't you drop us a line to let us know you are willing to "listen"?

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Removal of their equipment to Georgia, Alabama, and the Chattanooga District — the territory served by Central of Georgia lines — has aided textile manufacturers who have done so to prosper. There are factors in your cost of operation and your overhead which can be materially reduced by reason of conditions in this favored territory.

Find out what these factors are and apply them to your own operating and overhead costs. To enable you to make these comparisons of costs, write for our booklets which give the facts as to the territory our lines serve.

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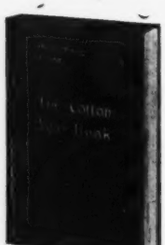

COTTON YEAR BOOK

1926 EDITION

This handbook is an annual review of the Cotton Industry, published by the Textile Mercury.

It consists of a complete outline of latest British practice in mill operation, management, trade customs, etc., with descriptions of machinery and processes.

Latest developments in British practice covering Cotton manufacturing, dyeing, bleaching and finishing are given special attention.

Artificial Silk Fibres and their characteristics form an important feature in this edition.

WOOL YEAR BOOK

1926 EDITION

This is also an annual review, but for the woolen and worsted industry.

Notes regarding the uses of synthetic fibres, including Rayon are included. The more important technical researches of last year are outlined in the review, "The Progress in Dyeing and Finishing During the Past Year" and full consideration is given to the latest mechanical developments. The statistical section has been fully revised and the latest information on prices, stocks, wages, etc., has been incorporated.

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FINANCIAL

Demand for Southern Shares Continues

GASTONIA, N. C., May 28.—The brisk demand for cotton mill stocks that has prevailed since early in February, continued through this week. However, two or three of the 25 stocks from which the average price trend is compiled weekly by R. S. Dickson & Co., softened in price sufficiently to bring the average down 10c a share, standing now at 111.02 compared with 112.02 for last week.

Stowe Spinning Co., Acme Spinning Co., and Mooresville were in demand throughout the week, the Stowe changing hands from 108 to 111 per share, a new high record for this stock.

In the South Carolina market Southern Bleachery, Victor-Monaghan, and Dunean preferred featured in activity.

There has been a recent demand for American Yarn & Processing Co. common at 96 to 100. Analysis of the financial statement of this well known company shows that at 100 for the stock that purchaser is paying at the rate of approximately $8 per spindle for the stock, this analysis giving due allowance for the processing plant. Replacement cost will doubtless approximate $45 per spindle.

Silk Stocks on N. Y. Exchange

(Week ending May 31)

1927 High	1927 Low	Stock	Sales	High	Low	Last
27¼	18¾	Belding-Heminway	2,700	21⅜	20	21⅜
16½	10½	Century Ribbon	2,100	15½	14½	15
57¼	49	Julius Kayser	12,400	57¼	55	55¼
18	11½	H. R. Mallinson	7,200	17¾	16¾	17½
14⅜	10⅛	Van Raalte	400	13	11¾	12

Fine Count Cotton Stocks Active

Leading New Bedford Shares Advance—Everett to Liquidate

BOSTON, June 1.

WITH the exception of the continued decline in American Woolen preferred, due to speculative anticipation of passing of current dividend, the only marked change in New England textile shares has been due to a fairly broad and active demand for stocks of fine count cotton cloth mills with advances ranging all the way from one or two points to 10 points. The fact that new business with this class of mills has fallen off somewhat during the last week or two fails to discourage buying of their shares, for the majority of the mills have sufficient unfilled orders to keep them busy through the summer and in some cases well into the fall, and an improvement in demand is anticipated after a few weeks of favorable weather for retail trade. Private trading has been fairly active locally in such stocks, and at today's auctions Butler advanced 4⅝ points to 57½, while Gosnold preferred advanced 9½ points to 38 and the common 8½ points to 16½. The only other notable feature of today's auctions was the sale of 310 shares of Salmon Falls Mfg. Co. at 31½, or an advance of 3½ points, anticipating the vote of stockholders to accept offer of $110,000 for the company's machinery and to continue liquidation of the property piece-meal.

American Woolen Preferred

While considerable blocks of American Woolen Co. preferred have changed hands on the New York exchange, and are indicative of short selling in anticipation of rumored passing of current dividend, sales on the local exchange have been very small and are evidently realizing sales of small investors who have been scared into parting with their stock. The last sale today was at 47, which is a decline of 8 points for the week and the lowest price ever touched by this stock. Although business with the big company thus far this year has not been as good as expected the company is understood to be in as strong a financial position as it was at the opening of the year and economies recently introduced may warrant continuance of the dividend.

The directors of the American Woolen Co. met on Wednesday and transacted routine business. They adjourned to meet again next week to consider action on dividend declaration.

Listed Shares Unchanged

American Woolen common has sold during the week within a range of 18¼ to 17¼, closing today at 17¾, which is identical with the price of a week ago. Amoskeag common has been fairly active within a narrow range of 60⅝ to 61 and is practically unchanged for the week; the preferred has been very quiet, but at 81 shows a net decline for the week of 2 points. Pacific has sold within a range of 39 to 39¾ with comparatively few transactions, and at 39½ shows a net advance for the week of ½ point. Bigelow-Hartford common at 84 is off ⅞ point for the week, but has sold in the meantime as high as 85; there has been a fair demand for the preferred at 101½, which is an advance of 1 point.

Everett Will Liquidate

At an adjourned meeting of stockholders of the Everett Mills, Lawrence, Mass., at the Boston office today the directors were authorized to take steps to liquidate the corporation. This was the annual meeting of the company and all of the old directors were re-elected, and Raymond Merrill was elected to succeed Patrick Sullivan, deceased. Another meeting will be held June 15 to take definite action on liquidation. Treasurer F. C. McDuffie reported for the fiscal year ended March 31 a loss of $518,707, of which $399,614 represented depreciation; working capital on that date was $147,917 as compared with $1,037,405 as of March 31, 1925. In a letter forwarded to stockholders last week treasurer F. C. McDuffie stated that the directors would not advise an attempt to raise new capital and that the only alternative will be liquidation. The letter is in part as follows:

"The directors have given most careful consideration to a plan along the following lines. To move to an advantageous point in the South 50,000 to 80,000 spindles, cost of the southern land mill buildings and village to be raised by mortgage bonds on a 7 per cent basis, secured by the Southern property; quick capital to be raised by reducing the present 21,000

MILL STATEMENTS

Name and address of company	Line of business	Fiscal year	Assets						Total	Liabilities		
			Cash and debts receivable	Raw materials, mdse., etc.	Total quick assets	Real estate, buildings and machinery	Miscellaneous Amount	Miscellaneous Description		Accounts payable, floating and funded debt	Capital stock	Surplus, profit and loss, etc.
Shawmut Mills, Fall River, Mass.	Cotton	Dec. 31, 1926	.....	.....	$351,524	$1,222,657	$12,712	Miscellaneous	$1,586,893	$365,500	$600,000	$621,393
		Dec. 31, 1925	.....	.....	429,785	1,265,479	10,619	Miscellaneous	1,645,883	376,000	600,000	669,883
Sharp Mfg. Co., New Bedford, Mass.	Cotton	Dec. 31, 1926	$466,802	$607,467	$1,074,269	6,053,030	*174,775	Miscellaneous	7,302,074	2,083,498	3,817,000	1,401,576
		Dec. 31, 1925	544,946	1,214,043	1,758,989	6,049,588	22,569	Miscellaneous	7,831,146	2,498,850	3,817,000	1,515,296
Wampanoag Mills, Fall River, Mass.	Cotton	Jan. 1, 1927	129,211	189,219	318,430	1,324,000	4,104	Miscellaneous	1,646,534	186,466	1,000,000	460,068
		Jan. 1, 1926	58,239	225,335	310,574	1,477,874	.....	.....	1,788,448	.....	1,000,000	788,448
Troy Cotton & Woolen Mfg. Fall River, Mass.	Cotton	Dec. 31, 1926	27,738	155,940	183,678	362,530	†304,947	Miscellaneous	851,155	508,485	300,000	42,670
		Dec. 31, 1925	29,283	119,221	148,504	380,920	‡328,521	Miscellaneous	857,944	449,200	300,000	108,744
Everlastic, Inc., Chelsea, Mass.	Cotton	Dec. 31, 1926	630,995	937,420	1,568,415	1,842,920	1,330,009	Miscellaneous	4,741,344	1,127,168	3,583,100	31,076
		Dec. 31, 1925	885,422	924,575	1,809,997	2,718,305	1,422,066	Miscellaneous	5,950,368	1,150,414	3,731,650	1,068,304
Whittenton Mfg. Co., Taunton, Mass.	Cotton	Jan. 1, 1927	1,086,036	1,328,543	2,414,579	1,448,541	1,200	Miscellaneous	3,864,420	760,527	2,700,000	403,793
		Jan. 1, 1926	749,262	1,855,535	2,604,797	1,508,018	1,200	Miscellaneous	4,114,015	1,105,900	2,700,000	308,115
Goodall Worsted Co., Sanford, Maine.	Wool	Dec. 31, 1926	2,258,290	3,108,523	5,366,813	3,980,809	3,750,109	Miscellaneous	13,097,731	35,311	7,500,000	5,562,420
		Dec. 31, 1925	1,932,439	2,950,823	4,883,262	3,963,251	3,273,158	Miscellaneous	12,119,671	24,054	7,500,000	4,595,617
American Printing Co., Fall River, Mass.	C. & Pr.	Dec. 31, 1926	6,387,554	2,106,002	8,493,556	6,667,557	924,052	Miscellaneous	16,085,165	4,341,631	2,000,000	9,743,534
		Dec. 31, 1925	7,860,987	6,144,217	14,005,204	6,956,379	1,088,795	Miscellaneous	22,050,378	10,325,841	2,000,000	9,724,537
Barnard Mfg. Co., Fall River, Mass.	Cotton	Dec. 31, 1926	.....	.....	470,795	1,465,508	.....	.....	1,936,303	16,308	1,250,000	66,995
		Dec. 31, 1925	.....	.....	623,498	1,463,074	.....	.....	2,086,572	199,573	1,250,000	636,999
Whitin Bros., Inc., Whitinville, Mass.	Cotton	Dec. 31, 1926	97,524	172,247	269,771	350,832	247,236	Miscellaneous	867,839	172,844	600,000	94,995
		Dec. 31, 1925	128,530	284,412	412,942	314,405	229,822	Miscellaneous	957,169	275,516	600,000	81,653
Paul Whitin Mfg. Co., Northbridge, Mass.	C. & S.	Dec. 31, 1926	240,688	792,928	1,033,616	1,247,926	609,644	Miscellaneous	2,891,186	323,858	1,200,000	1,367,328
		Dec. 31, 1925	333,127	1,239,921	1,573,048	1,222,241	503,599	Miscellaneous	3,298,888	435,487	1,200,000	1,663,401

* Includes profit and loss item of $148,773. † Includes profit and loss item of $273,763. ‡ Includes profit and loss item of $292,335.

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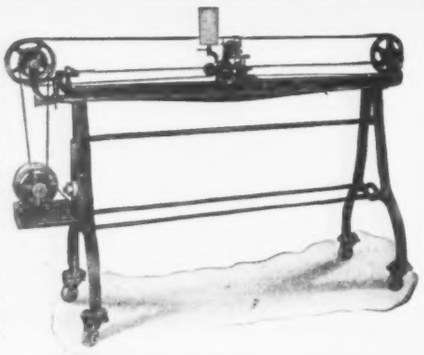

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Financial—Continued

shares of common stock to 7,000 shares without par value, and issuing 7,000 shares of 7 per cent preferred stock, with a bonus of one new share of common stock for each preferred share for $700,000.

"Arrangements would be made for experienced supervision of construction and operation of the southern plant. While negotiations were not carried to completion, it seemed probable the cost of the new southern property could be secured through bonds, and that adequate underwriting of 7,000 shares of preferred stock, with the common stock bonus, could be secured. After most careful consideration, the directors failed to approve the plan.

"Earnings to be reasonably expected after bond interest and preferred dividends, applicable to the new common stock, did not seem sufficient, in view of the fact that the southern mill would be so largely a new venture and that any present stockholder who could or did not subscribe to the new preferred stock would have only one share of new common stock in place of three shares of his present common stock."

At today's meeting one of the directors indicated that interests identified with the Alabama Power Co. were willing to underwrite a preferred stock issue if the company would consent to move 50,000 spindles South, but stated that such a move would eat up the remaining capital, would require an average of about $25 per spindle to locate in the South and would cost at least $2 per spindle to move the machinery South.

Tremont & Suffolk Report

At the annual meeting in Boston, May 27, of stockholders of Tremont & Suffolk Mills, Lowell, Mass, all of the officers and present directors, with the exception of E. Pennington Pearson, were re-elected. The balance sheet for the year ended December 31 shows current assets of $1,349,496 and current liabilities of $579,720, leaving net quick assets of $769,776. Accounts Receivable have been largely reduced since the first of the year and on April 1 totalled only $40,499. Treasurer Fred W. Steele stated in reply to a query of a stockholder that it was impossible to estimate what stockholders might receive in liquidation, noting the fact that outcome of the pending lawsuit of Ridley Watts & Co. would have a marked effect on the amount of cash to be available for distribution. This suit for breach of contract involves $270,000, but Wheaton Kittredge, attorney for the Tremont & Suffolk Mills, stated that, while the case would not come up in the New York Supreme Court for a long period, he felt that an amicable settlement might be reached between both parties out of court.

In their current investment letter Sanford & Kelley, New Bedford bankers, give Charles L. Harding, of Harding, Tilton & Co., much credit for "the good judgment and keen sense of honor which led him to protect" equities for the stockholders of the Gosnold and the Fairhaven mills. This portion of their letter follows:

"During the past year, Charles L. Harding, of Harding, Tilton & Co. was most adversely criticised by owners of the stocks in corporations of which Mr. Harding was president. The losses shown for the 1926 year would seem to prove that the management left something to be desired both in the matter of cost to manufacture the goods and their distribution. Viewed, however, from the point of view of comparisons with losses shown by some other cotton mills in Massachusetts, Rhode Island and other New England States, they do not appear so much worse.

"There is another angle to the situation for which Mr. Harding deserves in our opinion great credit and of which, so far as we know, no mention has been made. We refer to this man's refusal to become panic stricken at a time when metropolitan banks and smaller banking institutions, as well as stockholders, were so frightened that they were unwilling to provide additional working capital to keep the mills going. Had not Mr. Harding kept his mental balance and lent, through his organization, financial aid, when it was most needed, the stockholders of the Gosnold and Fairhaven very possibly would have lost all equity in these corporations. Too much credit cannot be given Mr. Harding for his good judgment and keen sense of honor, which led him to protect these equities for the stockholders when others failed to do so.

"The same thing holds true with regard to the Pemaquid Mills, the stockholders of which are now reaping the benefit of Mr. Harding's courage when it was lacking in others and the purchase, which we believe will prove to be of benefit to the corporation, of something in excess of $1,000,000 of net assets for in the neighborhood of $300,000. Fairhaven

(*Continued on page* 147)

DIVIDEND NOTICE

DRAPER CORPORATION

To Stockholders of Draper Corporation, Hopedale, Mass. A dividend of $1.00 per share has been declared, payable July 1, 1927 to stockholders of record at close of business May 28, 1927.

B. H. BRISTOW DRAPER,
Treasurer.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
10	Butler	100	57½	+4⅝
15	Nonquitt	100	33½	+ ½
8	Lancaster, pfd.	100	48¾	— ¼
10	Gosnold, pfd.	100	28	+8½
10	Gosnold, com.	100	16½	+8½
25	Naumkeag	100	194	+ ½
1	Everett	100	7½	—2½
310	Salmon Falls Mfg.	100	21½	+2½
1	Farr Alpaca	100	158½	.....
5	Connecticut, 1st. pfd.	100	35	—1
5	Nashua, pfd.	100	*95½	+1
7	Stevens	100	109	—5⅞
5	Davis	100	63⅛	.....

412 Total.

*And Accd.

Dividends Declared

Mill	Pd.	Rate	Stock	Payable	To stock of
Kilburn	Q	$1.50	Com.	June 15	May 31
West Point	Q	2.00	Com.	July 1	June 15

Textile mills considering direct sales of their production in the finished state to the wholesale, the retail, or the cutting up trades, can eliminate credit risks and keep distributing costs at a minimum through using the services of the Textile Banking Company.

Sales are converted into cash immediately upon shipment of goods.

Correspondence or interviews with reference to selling and factoring textile mill production invited.

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An organization of Spinners and Converters, equipped with the plants, capacity and resources to deliver a wide range of Natural and Processed Cotton Yarns,

Controlling:

Arcadia Cotton Mills, Inc.
Charlotte, N. C.—8's to 14's K.P.,—2 to 5 ply.

Belton Yarns Mills, Inc.
Belton, Tex.—10's to 24/1 K.P., Cones & Skeins.

Eastern Mfg. Co.
Selma, N. C.—26's to 40/1 K.P., Cones.

Ethel Cotton Mills
Selma, N. C.—20's to 24/1 K.P., Cones.

Johnston Mfg. Co.
Charlotte, N. C.—10's to 24/1 C.P., Cones & Skeins.

Monroe Mills Co.
Monroe, N. C.—24/1 to 36/1 and 2 ply C.P., Cones, Skeins & Warps.

Park Yarn Mills Co.
Kings Mountain, N. C.—58's and 60/1 & 2 ply C.P., Cones, Skeins & Warps.

Roberta Mfg. Co.
Concord, N. C.—10's to 18/1 K.P., Cones.

White Parks Mills Co.
Concord, N. C.—8's to 16/1 K.P., Cones.

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Single Mercerized, Bleached, Tinted & Dyed Fine Yarns to 120/2.

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Spinners and Processors
CHATTANOOGA
Tennessee

Forrest Mercerizing Co.

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80/1
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100/1
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100/2
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COTTON YARNS

Boger & Crawford Expansion Probable

PHILADELPHIA.—Boger & Crawford, manufacturers of mercerized yarns, having plants here and at Lincolnton, N. C., have purchased a tract of land comprising six acres with a 500 ft., railroad siding along the Pennsylvania railroad directly across from their present plant here. The ground just acquired is in one solid block being one of the largest unimproved parcels within the city limits and will give them access to the railroad from either side. The acquisition of this six acre plot will give Boger & Crawford a total of 16 acres of ground, their present modern plant being situated on a 10 acre plot. While this concern has nothing definite to announce as to their plans for the newly acquired ground a member of the company states it is along lines of expansion and progress characteristic of them during recent years. It is probable they will announce their plans in this connection in the near future.

Yund, Kennedy & Yund, Amsterdam, N. Y., have enlarged their working force during the last month due to increased business demands.

Institute Confers With Yarn Men

Matters Pertaining to Conduct of Trade Considered

A CONFERENCE was held on Wednesday of this week at the offices of The Cotton-Textile Institute, New York, between a committee of the Cotton Yarn Merchants Association and officials of the Institute. This committee, appointed by President Clapper, of the association, consists of F. A. Rakestraw, chairman, Ralph Stevens, John Mitchell, L. C. Linkroum, and J. P. Eddy. While it is impossible at this writing to give a report of the deliberations of this committee, nevertheless it is understood that matters pertaining to the sale of yarn were the principal topics of discussion. Included among these subjects was the question of commissions and the much discussed question of merchandising yarns. These matters have been considered of late by the Yarn Merchants' Association and appropriate resolutions passed indicating that, as far as members of the organization are concerned, they feel it necessary, for the best conduct of the yarn trade, that a full 5% commission should be demanded by the agent in the sale of the yarn. In other words this is a stand against the splitting of commissions in order to obtain business.

Merchandising of Yarn

Although it was intimated in last week's issue that apparently certain yarn houses have bought yarn for their own account and that the situation afforded more of a basis for such operations than in a long time, the stand of the yarn merchants is decidedly against the practice of merchandising. If reports are to be believed opinion on this subject is not uniform. In other words, there are those who advocate a slight letting down of the bars, to the extent, at least, that yarn houses will be allowed to carry a certain amount of yarn in stock to satisfy the current demand from their customers for immediate delivery. Doubtless, this subject was considered at the conference as it will be at other conferences in the future. It is realized that little money has been made by merchandising yarn during the last two or three years; and many would be glad to see the practice eliminated and the trade established on a strict commission basis. There are those who, while admitting the force of the argument against purchasing for one's own account and holding for a profit, at the same time claim they are forced to this position by the action of the spinner. These same authorities contend that in the final analysis the spinner has it in his own hands to rectify many of the abuses and uneconomic practices that occur in the selling markets. If the spinner, they claim, would only show sufficient back-bone in demanding the sale of his product on economic lines, forbidding speculation and holding for standardized practices in the matter of commissions, terms, etc., he could create a revolution in the marketing of his product with benefits which would redound to the benefit of all concerned.

May Mean Better Conditions

The conference held on Wednesday is the first that has been called between yarn sellers and The Cotton-Textile Institute. While a yarn spinning

Cotton Yarn Quotations

Carded—(Average Quality)

Double carded weav'g and knitt'g yarn 2c to 4c higher, according to quality

Single Skeins or Tubes—(Warp Twist)

4s to 8s	25½	—26	20s	29½	—30
10s	—	—26½	24s	—	—31½
12s	—	—27	26s	—	—33½
14s	—	—27½	30s	35	—36
16s	28½	—29	40s	46	—47

Two-Ply Skeins and Tubes

8s-2	—	—26	26s-2	34	—34½
10s-2	—	—26½	30s-2	35½	—36
12s-2	27	—27½	36s-2	—	—43
14s-2	28	—28½	40s-2	—	—46
16s-2	29	—29½	40s-2 High breakage	48	—49
20s-2	30	—30½	50s-2	—	—56
24s-2	33½	—34	60s-2	—	—62

Single Warps

10s	26½	—27	24s	33½	—34
12s	27	—27½	26s	34½	—35
14s	27½	—28	30s	—	—36
16s	29	—29½	40s	46	—47
20s	30	—31			

Two-ply Warps

8s-2	—	—27	24s-2	34	—34½
10s-2	—	—27½	26s-2	—	—35
12s-2	—	—28	30s-2	36	—37
14s-2	28½	—29	40s-2 ordinary	—	—47
16s-2	29½	—30	50s-2	56	—57
20s-2	30	—30½	60s-2	62	—63

8s-3 and 4-ply skeins and tubes; tinged, 23½-24½; white, 25½-26c.

Hosiery Cones (Frame Spun)

8s	—	—26½	22s	31	—32
10s	—	—27	22s (silver Jaeger)	—	—34
12s	27½	—28	24s	—	—33
14s	28	—28½	26s	—	—34
16s	28½	—29	30s tying in	33½	—34½
18s	—	—29½	30s extra quality	36½	—37½
20s	30	—30½	40s	—	—47

Combed Peeler—(Average Quality)

Warps, Skeins and Cones

20s-2	43	—44	50s-2	62	—65
30s-2	49	—50	60s-2	72	—75
36s-2	54	—56	70s-2	83	—86
40s-2	58	—60	80s-2	95	—1 00

Singles

12s	—	—38½	30s	48	—49
14s	—	—39	38s	53	—54
16s	—	—39½	40s	54	—56
18s	—	—40	50s	61	—63
20s	—	—41	60s	70	—72
24s	—	—43	70s	82	—85
28s	—	—47	80s	93	—95

Mercerized Cones—(Combed, Ungassed)

26s-2	64	—65	80s-2	1 12	—1 17
30s-2	66	—67			
36s-2	70	—72	**Singles**		
40s-2	72	—74	30s	—	—90
45s-2	77	—80	40s	—	—93
50s-2	78	—82	50s	—	—98
60s-2	87	—91	60s	—	—1 08
70s-2	1 00	—1 05	70s	—	—1 22
			80s	—	—1 60

Peeler—(Super Quality)

Single Cones

	Carded		Combed			Carded		Combed	
10s	30	—31	40	—42	26s	35	—36	48	—50
14s	31	—32	41	—43	30s	37	—38	52	—54
16s	31½	—32½	42	—44	36s	42	—43	56	—58
18s	32	—33	43	—45	40s	46	—48	60	—65
20s	32½	—33½	44	—46	50s	—	—	65	—70
24s	34	—35	46	—48	60s	—	—	72	—75

Combed Cones, Warps and Tubes

20s-2	46	—48	40s-2	60	—65
24s-2	48	—50	50s-2	65	—70
28s-2	50	—52	60s-2	75	—80
30s-2	52	—54	70s-2	85	—90
36s-2	56	—58	80s-2	1 00	—1 05

Combed Reverse Twist Thread Yarns—Skeins, Tubes or Cones 2, 3, and 4-ply

	Peeler				Sakelarides			
	Average		Best		Average		Best	
24s	—	—59	63	—64	76		81	—
30s	—	—61	65	—66	78		83	—
36s	62	—63	67	—68	80		85	—
40s	—	—68	72	—73	85		90	—
45s	—	—73	77	—78	90		95	—
50s	—	—78	82	—83	96	1 02		—
60s	—	—88	92	—93	1 07	1 12		—

Quotations are average prices of the counts and qualities indicated at the close of business June 1. They do not cover lower or higher qualities unless specifically noted. For New York spot cotton prices, see page 127. For staple cotton prices, see page 129.

ABERFOYLE MANUFACTURING COMPANY

MERCERIZED YARNS

MAIN OFFICE
Bankers Trust Building
PHILADELPHIA

Mangum Street
HIGH POINT, N. C.

521 Court St.
READING, PA.

James Building
CHATTANOOGA, TENN.

323 So. Franklin St.
CHICAGO, ILL.

122 East 7th St.
LOS ANGELES, CAL.

Westaway Building
HAMILTON, CANADA

MILLS
CHESTER, PA.

Cotton Yarns—Continued

group has been organized in the South, it is the first recognition that has been given the yarn selling fraternity. While skeptics are pessimistic as to the benefits to issue from such gatherings, those who take a long look into the future prophesy that it is the beginning of a better condition of affairs in the selling markets and that relations between yarn houses and the spinner will, inevitably, be improved. There is also talk that the formation of a yarn group means eventually certain consolidations of yarn mills with the placing of the sale of the combined mills product in exclusive agents' hands. This development, however, it is admitted, may take a long time to accomplish; and in the meantime, no one denies that there are plenty of matters, both with respect to the yarn spinner's situation and also with regard to conditions in the selling markets which require earnest deliberation and consideration.

Prices Point Upwards

As a consequence of a firmer raw material market, the spinner's attitude toward quotations shows increasing firmness. While business is generally inactive, levels of a week or two ago will not be considered by the spinner. Of course, on such a market as this reports of low prices are heard and doubtless certain sales have been made decidedly below the spinner's idea of price. For instance, on hosiery yarns, it is claimed that the best price so far secured has been 28c in one particular instance, with the majority unwilling to pay more than 27½c. And yet few spinners would consider 28½c and many are holding for 29c. The same is true on 22s, where a sale at 30c is considered a favorable one; and yet the spinner would hesitate about accepting anything under 31c. In knitting yarn, the majority of sales have been to balbriggan manufacturers. Many knitters will need yarn to make their fall lines, but the majority are waiting until there is more activity on duplicates for the fall season, with the possible consequence of paying more when they actually decide to operate. In weaving yarn the market is very quiet without material change in price.

Chattanooga Yarn Market Is Quiet

CHATTANOOGA, TENN.—The local yarn market continued rather quiet during the week ending May 28. There seemed to be a tendency toward higher prices although no general advances have been made, the quotations furnished by local brokers being the same as last week.

In mercerized yarns 60s-2 are still quoted at 87c. There seems to be a tendency toward stiffer prices in combed peeler. Combed singles in 18s are still quoted at 39 to 40c. Tens carded cones continue firm at 26½ to 27c.

Push Cotton Planting as Flood Recedes

WASHINGTON, D. C.—Flood relief work passed this week from means taken to alleviate immediate distress to the establishment of measures for rehabilitation of the flooded areas. President Coolidge conferred on Tuesday with Secretary of Commerce Hoover, Eugene Meyer, Commissioner of the Federal Farm Loan Bureau, and Lewis E. Pierson, president of the U. S. Chamber of Commerce, on financing rehabilitation work. On Wednesday Secretary Hoover discussed the situation with financial interests in New York. Special credit corporations are being set up, the local capital of which will be doubled by subscriptions from banking and industrial houses throughout the country.

"The real problem in the flooded areas is to get the cotton crop up," said Secretary Hoover. "We are engaged in a race with the season. The stability of the special credit corporations will depend largely upon the success of the crop," said Mr. Hoover. These corporations in Arkansas and Mississippi now have a capital of $500,000 each and in Louisiana the local capital amounts to $750,000. With this amount doubled from outside sources, the $3,500,000 available for special financing will make available a credit power, through rediscounts and otherwise of perhaps $10,000,000, Mr. Hoover estimated.

Improved Testing of Yarn Strength

WASHINGTON, D. C.—The Bureau of Standards has developed an improvement on the skein test for breaking yarns. By the old method 120 yards of yarn are first wound on a reel 1½ yards in diameter. This skein consisting of 80 strands, is then placed on drums in the testing machine and broken. Some modifications of this test have been suggested, notably the proposed method of the American Society for Testing Materials for testing rayon. This method requires that a segment of the skein be cut from it, the yarns made as nearly parallel as possible, and broken in the jaws of the testing machine in a manner similar to the strip test for cloth.

The new method developed at the Bureau is as follows:

The yarns are wound with controlled tension around an elongated U-shaped rod of sufficient diameter to permit the insertion of a transfer clamp between the two layers of yarns. Using the clamp, the yarns are inserted between the jaws of the testing machine, after which the clamp is removed.

The advantages of this method are that the yarn is tensioned equally and this tension is preserved until the start of the test. Consistent results have been obtained, especially with stress-strain curves.

GROVES MILLS, Inc.

SUPER QUALITY

COTTON YARNS

COMBED PEELER, 24s to 80s, single and plies
CONES, TUBES, SKEINS AND WARPS
Samples and quotations promptly furnished
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MILLS AT GASTONIA, N. C.

VAN COURT CARWITHEN

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Sole Representative
SWIFT SPINNING MILLS — Cotton Yarns of Quality
BRADLEY MFG. CO.
MUSCOGEE MFG. CO.
Whites, Stock, Dyed and Heathers
ALL of COLUMBUS, GA.
FROM MILL DIRECT TO CONSUMER

BURNS-PARR, Inc.

COTTON AND RAYON YARNS

Mariner & Merchant Bldg. PHILADELPHIA

United States Representatives: HARWOOD CASH & CO., LTD.
Fine Yarns for Curtains, Levers, Voile, Etc.
Mansfield, England

JAMES E. MITCHELL COMPANY

Cotton Yarns

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Superior Quality Knitting Yarns

Sole Representatives
Bladenboro Cotton Mills—Vass Cotton Mills
8s to 30s Extra Carded

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COTTON YARNS
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PROVIDENCE, R.I.

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TRYON, NORTH CAROLINA

Our Specialty—
SINGLE Mercerized

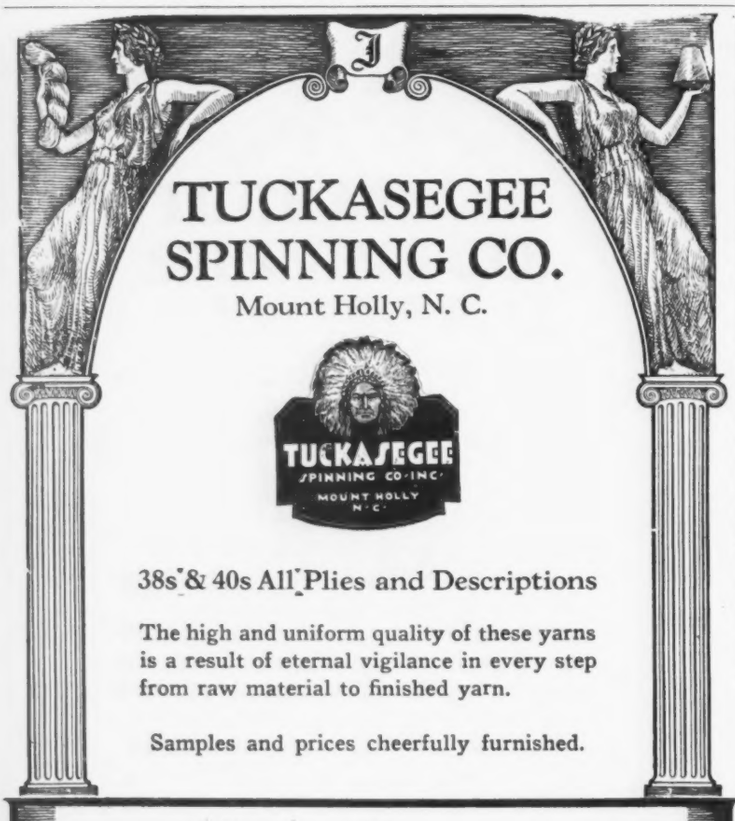
Yarn for Splicing and Plaiting

Single Mercerized Yarns up to 100/1—Also Two Ply Mercerized 100/s to 140/s
Tinted yarns Licensed under Patent No. 1,496,696.

Wire or write us for prices and samples

SOUTHERN MERCERIZING CO.
TRYON, NORTH CAROLINA

Sole Selling Agents for United States and Canada
Cotton Products Company
Bankers Trust Bldg., Philadelphia, Pa.



TUCKASEGEE SPINNING CO.
Mount Holly, N. C.

TUCKASEGEE SPINNING CO. INC. MOUNT HOLLY N. C.

38s & 40s All Plies and Descriptions

The high and uniform quality of these yarns is a result of eternal vigilance in every step from raw material to finished yarn.

Samples and prices cheerfully furnished.

H. A. James
SELLING THE OUTPUT OF OVER 150,000 COMBED YARN SPINDLES IN N.C.
GEN. SALES MGR.
450 FOURTH AVE. • NEW YORK • PHONES: ASHLAND 3930-31-32

Standard of Comparison

In quality, uniformity and knitting economy Standard-Coosa-Thatcher Co., Spinning and Mercerizing is an ideal "standard of comparison."

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Chattanooga, Tenn.

Sales Office—Lafayette Bldg., Philadelphia

Canadian Representative
Wm. B. Stewart & Sons, Ltd., Toronto, Montreal

Standard
Mercerized Yarn

Cotton Yarns—Continued

Will Carded Yarn Prices Hold?

A Test of Market's Strength Approaching

PHILADELPHIA.

A TEST of the market is close at hand. Carded yarns have advanced rapidly as a result of strength in the raw material market, demand having had a relatively small part in bringing the present upturn about. Sales volume of carded yarns has in fact declined in almost the same ratio prices have advanced. Trading has fallen off in proportion to the extent spinners have raised quotations. The past week has been characterized by hand-to-mouth demand, quick delivery being specified by manufacturers in most instances, there having been a larger number of contracts placed in knitting yarns than in weaving.

While carded yarns are considerably higher than two weeks ago spinners call attention to the fact yarn prices have not kept abreast of rises in the raw material market during recent months. In view of this it will be interesting to watch developments in the yarn market during the next few weeks. Will yarn prices advance further to bring them up to a level where spinners claim the cotton market justifies or will falling off in demand now apparent in this market play a part in not only stopping the advance in cotton and yarns but bring about a reaction?

Advance Continues

Although prices of both carded and combed have been advanced further this week, one of the largest spinning organizations in the country having raised their prices on carded yarns two cents on Monday, they and others are willing to admit they are not booking any considerable volume of business even before they put the latest advance into effect. Yarn dealers in a majority of instances express little apprehension over the falling off in demand, believing manufacturers will finally be forced into the market to renew their supplies, paying at that time current prices or higher ones.

As justification for this they review the action of cotton and yarn market since the first of the year, the former having advanced more than four cents during this time while most counts and qualities of yarns have not advanced in like proportion, excluding combed peeler. For example, spinners of ordinary quality knitting cones are quoting this yarn on the basis of 27c for 10s. Dealers point to cotton going into such yarn as quoted on the future market, where the price is close to 17c, leaving the spinners upon a replacement basis, a spinning margin of only 10c which most manufacturers are ready to admit would not leave the spinner a profitable margin upon which to work. This, of course, leaves out of consideration those spinners who have cheap cotton in their warehouses as this is not a basis on which to figure.

Spinners' Margins

Spinners of weaving yarns call attention to a similar condition. Sales of 20s-2 warps of ordinary quality have been made this week at 29½c which would leave the spinner a margin of 13c on the above cotton basis, a margin that is three cents lower what a majority here claim they should receive. From these examples one may obtain an idea why spinners and a majority of dealers here are predicting, with no small degree of certainty, that manufacturers will not only soon be compelled to return to the market but also that they will have to pay current prices or higher for carded yarns, one house as we have seen having already raised their prices two cents, though they were doing little business at the former level, stating their mills could not afford to sell for less at current level of their raw material.

Carded yarns are acting in somewhat the same manner combed peeler displayed several months ago. At that time demand was dull and manufacturers could not see the justification for any advance and refused to buy. These yarns were then selling at cost of spinning or less. The first advance not only held although manufacturers bought no more yarn but each week witnessed further increases, this being aided and brought into more prominence by the flood in the Mississippi valley. Manufacturers and mercerizers finally came into the market and paid prices ten cents above that they could have secured a month previous. Consumers of carded yarns will not be compelled to face a similar condition in their grades of yarn but many believe that an advance to a smaller degree will come in carded even though manufacturers do not buy. There are many in yarn trade ready to admit the possibility of 18c cotton. Should this occur then even the latest carded yarn prices will not be obtainable.

Buyers Not Worried

Those holding the opposite view of the future, taking in a majority of manufacturers up-town and up-state, are firmly of the opinion the present bulge in cotton and carded yarns will not hold and therefore their present policy of buying from hand-to-mouth is the proper one. That most manufacturers are in fact adhering to this is seen in the size of sales reported this week. It is noticeable however all manufacturers are in need of yarn and many are ordering a few bales shipped them by express. Manufacturers also call attention to the fact exports will not continue during next

CANNON YARNS

Cotton Yarns *of* Quality

Quality:—We invite inquiries from the Knitter who puts *Quality* above *Price*—Who is proud of his product and guards it jealously. *Cannon Yarns* are dependable—The same high quality is maintained year after year.

The yarn is the product of our own mills, and back of every pound is the guarantee of

THE CANNON MILLS
INC.
From Spinner Direct to Manufacturer
PHILADELPHIA

New York Providence Boston
Reading, Pa. Chicago Utica, N. Y.
Chattanooga

THE STANDARD OF VALUE & QUALITY

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Selling Agents for

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Tryon, N. C.

Single Mercerized Yarns

A. M. SMYRE MFG. CO.
Gastonia, N. C.

Combed Peeler Yarns
30's to 70's

Weaving and Knitting

NATIONAL YARNS

Getting Acquainted

Roosevelt said, "There's a mighty human side to business when you really get acquainted with the men in it." And you'll find that remark more than true when dealing with the experienced men of National!

We would like to know you better. ***Write for samples.***

NATIONAL
YARN & PROCESSING CO.

Quality Mercerized, Dyed and Bleached Yarns

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MILLS - ROSSVILLE, GA.

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O. S. Hawes & Bro.

Charlotte, N. C.
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Johnston Building

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712 North 5th St.

DEPENDABLE YARNS

Spun from selected cotton

Cotton Yarns of
Unvarying Quality for
Knitting (underwear and hosiery)
and Weaving

Cones, Skeins, Tubes
8s to 30s single; 8s to 16s ply

WINTHROP MINCHER
N. Y. State Rep., *Troy, N. Y.*

HENDERSON & HARRIET COTTON MILLS

Henderson, N. C.

Cotton Yarns—Continued

crop year at the recent rate, as a bearish factor.

Notwithstanding these arguments a majority in the trade continue to be conservatively bullish and point to the fact the carry-over this year will be no more than in an average year, so that they believe cotton could easily reach higher levels particularly in view of the trend of other commodities to reach higher ground. With a normal carry-over and with consumption continuing at the recent high rate many believe current quotations in cotton market are not out of line.

Sales of weaving yarns have been made this week at 29½c for 20s-2 warps of average grade and 35½c for 30s-2, these being on the low side of the market, spinners quoting these counts at 31c to 32c for the former and 36½c to 38c for the latter. Knitting yarns have not sold freely at the new level of 27c or 27½c for 10s although a number of large sales of extra-carded yarns were made upstate this week, one dealer selling almost 100,000 lbs. at basis of 36½c for 30s for late summer delivery. Two-ply combed yarns are strong with few large sales reported, these spinners having booked a large volume of business during previous weeks.

Advance Firmly Held

Most Southern Combed Yarn Spinners Sold To August

BOSTON. — Buyers continue quite generally to resist the advance in prices, but their inclination to confine purchases to a hand-to-mouth basis is handicapped by their discovery that comparatively few spinners are able to make desired deliveries even at advanced prices during June and July. This is especially true of leading southern spinners of both carded and combed yarns. It is an experience that buyers have not been up against for several years, and it is not strange that they find it difficult to adjust themselves quickly to a sellers' market.

The majority of yarn users cannot, or will not, believe that they no longer hold the whip hand, or that present prices can be long continued. There are some spinners and dealers who hold similar opinions, but as long as record-breaking production is being absorbed by unfilled orders, and as long as raw cotton prices continue to advance, or are comparatively stable, sellers will go no farther than to accept orders freely at full market prices for such deliveries as are available.

On most varieties of carded weaving and hosiery yarns top prices of last week are minimum prices of today, and in the combed yarn division of the market asking prices of last week are today's selling prices. The minimum on weaving yarns is a basis of 30½ to 31c for 20s-2 warps, and on hosiery yarns a basis of 26½c for 10s frame-spun cones. With the exception of one or two eastern spinners of combed yarns who operate their plants on a night and day basis, and are still accepting orders on the basis of top prices for southern yarns, or about 40c for 18s combed peeler cones, the majority of eastern spinners want at least a 44c basis for 18s, with others holding at 45c to 46s for a super yarn. Most eastern spinners want a basis of 80c for 60s-2 combed peeler warps, and there are comparatively few southern sellers below a basis of 75c. Mercerized and reverse twist thread yarns are also very much firmer than they have been for several years and a further advance is looked for in the latter early this month.

Choice Comber Touches 15c

Genuine Scarcity of Supplies Forces High Values

BOSTON.—Most wastes are slowly moving upward to the higher level of cotton values established during the last few days. It is however a question whether the higher prices asked for wastes will not tend to check buying. It has yet to be seen whether the price of cotton well above 16c can be maintained and it has also to be noted that wastes coming in on percentage contracts are also higher-priced for the houses receiving them. If cotton were to slump it would be possible for contractors to be left with some volume of materials billed in on a high cotton price and find it no easy matter to dispose of them on a lower cotton level. This perhaps is one of the usual hazards of cotton waste merchandising

Consumers not actually in want of further supplies express themselves rather sceptically as to the soundness of the rise of cotton values. With spot at 16.50c. comber at 90% would cost 14.85c and this is about 30 points higher than actually made. Comber at 14c and cop at 12c are both too high for English importers. Consumption of wastes is going on steadily and output is also large. On which side the balance lies no accurate information is obtainable. Only in the case of comber and threads can it be said with relative certainty that the demand is larger than the actual mill output.

Dealers have been quite active recently picking up domestic and foreign comber, paying prices that seem high as compared with a month ago. Some large New York consumers are said to have contracts calling for delivery of comber at 13¼-13½c while the market at this time is around 14½-15c. Export of this material has slowed down, the English it is understood being unwilling to place new business above 14½c f.o.b. Manchester which price is approximately 13½c Boston.

Current Quotations

Peeler comber	14¼—14¾c.
Peeler strips	12 —13c.
Egyptian comber	12½—13c.
Choice willowed fly	5½— 6½c.
Choice willowed picker	4½— 5c.
Sak. strips	14 —15c.
Linters (mill run)	4½— 5c.
Spoolers (single)	10½—11c.
Fine White cop	12 —12½c.

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COTTON YARNS
77 SUMMER ST. BOSTON, MASS.

THE J. R. MONTGOMERY CO. WINDSOR LOCKS, CONN.
MERCERIZED COTTON YARNS Manufacturers of Give the high Silk-like lustre In Knit Goods and Woven Fabrics
NOVELTY YARNS Poucle, Bourette and Spirals in Cotton, Wool, Worsted, Mohair and Silk.
COTTON WARPS On Beams, Jacks, Spools and Tubes In Fancy Twist, Colors and Printed.

MONUMENT MILLS, Housatonic, Mass.
HIGH GRADE COTTON YARNS, White, Colors, Bleached
On Beams, Jack Spools, Cones, Skeins and Chain Warps
FAST-BLACKS & COLORS For Woolen Mills a Specialty WE SELL DIRECT

GATE CITY COTTON MILLS
Manufacturers of
Superior Quality
WHITE KNITTING YARN on CONES
We sell direct to Knitters and guarantee satisfaction
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INDUSTRIAL YARN CORPORATION
Weaving—COTTON YARNS—Knitting
88 LEONARD STREET, NEW YORK

O. S. HAWES & BRO.
FALL RIVER, MASS.
COTTON YARNS ALL FORMS AND NUMBERS

JOHN F. STREET & CO.
COTTON YARNS
201 Industrial Trust Bldg., PROVIDENCE, R. I.
CHICAGO PHILADELPHIA NEW YORK

TILLINGHAST-STILES CO.
JESSE P. EDDY, Treas.
Cotton and Worsted Yarns
PROVIDENCE, R. I.
Room 922, Webster Bldg. 327 So. LaSalle St., Chicago

ORSWELL MILLS Fitchburg, Mass.
COTTON YARNS
Carded and Combed—Gassed and Ungassed

EWING-THOMAS CONVERTING CO.
Specialists in Mercerized Yarns CHESTER, PA.
Warp Mercerizing for the Trade
Gassed—Natural—Bleached—Colors
DOUBLE MERCERIZED SPECIAL PROCESS

The Plush Yarn With The Velvet Feel

VELBLADE PLUSH YARNS

10/2 TO 30/2

Velblade Yarns are spun with special equipment expressly designed and installed for the manufacture of quality Plush Yarns for the highest grade fabrics.

THE Bladenboro Cotton Mills, INC.

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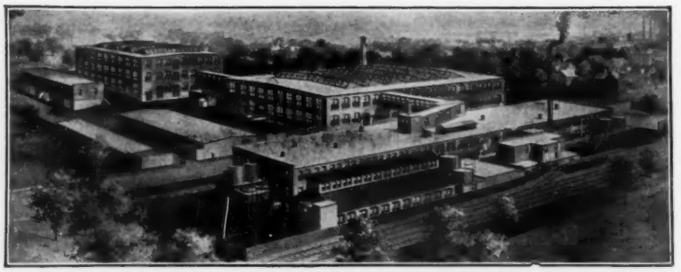
FORREST BLDG. 119 So. 4th St. PHILADELPHIA, PA.

TOULSON YARNS, INC.

Bridgeport, Conn.

Novelty Yarns

of Every Description



Worcester Bleach & Dye Works Co.

ESTABLISHED 1861 WORCESTER, MASS.

BLEACHERS, DYERS AND MERCERIZERS OF COTTON YARNS AND WARPS

Winding on Cops, Tubes or Cones

Manufacturers of Cotton Yarns in Fast Colors—Also Glazed Yarns

"Sewing and Stitching Threads for All Industries"

RAYON DYEING AND WINDING

Mr. Russell B. Lowe, who was President of Parkhill Manufacturing Company, one of our largest customers before its absorption by another Company, when meeting our Treasurer in New York on one occasion said: "You ought to feel complimented on setting the standard for Southern yarns, for people trying to sell me other yarns always say, "We guarantee these to be as good as Rockfish.'"

That was true then and it is true today. Why not get the "Standard" and quit experimenting? Rockfish yarns, 26s to 40s, are now offered direct to the trade through our own office.

ROCKFISH MILLS, INC.

456-460 Fourth Avenue, New York, N. Y.

Telephone, Ashland 4342 • *H. Gray Dolliver, Sales Manager*

DURHAM SPINNING MILLS HOLLAND & WEBB, Ltd.

J. BLACKWOOD CAMERON

American Casualty Bldg. Reading, Pa.

COTTON YARNS

Combed *Carded* *Mercerized*

Representatives

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Chattanooga
R. D. McDONALD
James Bldg.

Statesville, N. C.
D. F. WALLACE
Jenkins Bldg.

COTTON

Cotton Higher on Poor Weather

West Texas Drouth Attracting Attention—Planting in Flooded Area

INCREASING anxiety as to the start of the crop has been reflected by further advances in the cotton market during the week. There was considerable realizing in advance of the holidays, but it was readily absorbed. Both New Orleans and Liverpool showed strength over the local Memorial Day adjournment, owing to unfavorable weather reports, and the market here sold up to 17.31 for October and 17.61 for January contracts on Wednesday with July at 16.93 showing an advance of 468 points from the low level reached by that position on the decline of last winter.

The advance during the earlier part of the week was promoted by reports of unwanted rains in parts of the Mississippi Valley, but later attention seemed to be shifting from the flooded area to the droughty sections in the western parts of Texas. Private reports have been received here indicating that the lack of rain there was becoming serious and might result in a considerable abandonment of acreage unless the needed moisture was soon received. There have also been some scattering complaints of insufficient moisture in eastern belt sections, and while it would appear that the crop on the whole has made rather better progress than during the previous week, favorable features have been obviously outweighed by the drawbacks in sections which had been counted upon to help make up for a probable reduction in the central belt.

Considerable progress is reported in the planting of the crop in formerly flooded sections, and some authorities in the trade are of the opinion that the loss of production directly resulting from the overflows of this spring will not exceed 500,000 bales and may fall below 400,000 with a favorable growing season. According to the last weekly report of the Weather Bureau scattered showers in the western belt and some fairly good rains in the eastern portion with the generally warm weather, made conditions mostly favorable for cotton except where it continued too dry.

Several of the private end-May crop reports have been published, with condition figures ranging from 67.9 up to 74 and with figures on the abandonment of acreage ranging from a decrease of 9.1 to 13.2%. A report by a prominent Chicago authority making the condition 74 and the indicated decrease in acreage 9.1 was interpreted as pointing to a crop of 14,800,000 bales contingent upon weather conditions during the balance of the season. The opinion has been expressed in some trade circles here that the present price is high enough to discount a 15,000,000 bale crop, and reactionary sentiment was considerably in evidence at the close of Wednesday.

The following table shows Wednesday's closing quotations in the leading spot markets of the country, with the usual comparisons:

Market	May 25	June 1	Change	Last year	Sales
Galveston	16.25	16.85	+60	18.40	9,964
New Orleans	16.06	16.50	+44	18.09	13,169
Mobile	15.35	15.85	+50	17.55	446
Savannah	15.84	16.41	+57	17.95	81
Norfolk	15.81	16.25	+44	18.13	1,768
New York	16.50	16.95	+45	18.85	4,122
Augusta	15.63	16.13	+50	18.00	991
Memphis	15.25	15.75	+50	17.75	14,150
St. Louis	14.75	15.25	+50	17.75	.....
Houston	16.05	16.55	+50	18.25	2,317
Dallas	15.15	15.65	+50	17.90	16,152

The following differences on the off middlings are given as compiled from the report received by the New York Cotton Exchange. The cotton grades marked ** are not delivered on contract.

	Dallas	Memphis	Montgomery	Augusta	Average
WHITE GRADES					
M. F	1.50†	1.75†	1.25†	.90†	1.39†
S. G. M.	1.25†	1.50†	1.00†	.75†	1.15†
G. M.	1.00†	1.25†	.75†	.63†	.91†
S. M.	.75†	.75†	.50†	.50†	.65†
S. L. M.	1.00*	1.00*	1.00*	1.00*	.94*
L. M.	2.25*	2.25*	2.00*	2.00*	1.99*
S. G. O.**	3.50*	3.50*	3.25*	3.25*	3.27*
G. O.	4.75*	4.50*	4.25*	4.50*	4.42*
YELLOW TINGED					
G. M.	.75*	.75*	.50*	.50*	.57*
S. M.	1.00*	1.25*	1.00*	1.00*	.99*
M.**	2.25*	2.25*	2.25*	2.00*	2.10*
S. L. M.**	3.50*	3.50*	3.50*	3.50*	3.35*
L. M.**	4.75*	4.75*	4.75*	4.75*	4.60*
YELLOW STAINED					
G. M.	2.00*	2.50*	2.00*	2.00*	2.04*
S. M.**	2.50*	3.00*	2.50*	2.50*	2.51*
M.**	3.25*	3.50*	3.25*	3.25*	3.29*
BLUE STAINED					
G. M.*	2.00*	3.50*	2.00*	2.00*	2.00*
S. M.*	2.75*	3.25*	2.75*	2.75*	2.71*
M.**	3.50*	3.50*	3.75*	3.75*	3.60*

* Off middling. † On middling.

Cotton Statistical Data

(Fluctuations of Futures)

	Closed May 26	For week High	For week Low	Closed June 1	Net Change
June	16.12	16.82	16.12	16.67	+.55
July	16.22	16.93	16.11	16.71	+.49
August	16.31	17.10	16.31	16.82	+.51
September	16.52	17.07	16.52	17.01	+.49
October	16.59	17.31	16.47	17.08	+.49
November	16.71	17.43	16.71	17.21	+.50
December	16.83	17.57	16.70	17.34	+.51
January	16.90	17.61	16.77	17.41	+.51
February	16.99	17.69	16.99	17.50	+.51
March	17.09	17.79	16.95	17.60	+.51

Spot Fluctuations for Week

(Middling)

	New York	N. Orleans	Liverpool
Friday, May 27	16.75c	16.22c	8.94d
Saturday, May 28	Holiday	Holiday	.....
Monday, May 30	Holiday	Holiday	.....
Tuesday, May 31	17.05c	16.59c	9.14d
Wednesday, June 1	16.95c	16.50c	9.26d
Thursday, June 2	17.00c	16.56c	9.11d

Spot Fluctuations and Stocks

	Prices June 1	Stocks This week	Stocks Last year
New Orleans	16.50	434,942	254,617
Mobile	15.85	32,384	5,157
Charleston	.....	32,869	32,828
Savannah	16.41	36,501	49,806
Galveston	16.85	303,825	330,277
Wilmington	.....	25,776	18,474
Norfolk	16.25	64,460	84,557
Augusta	16.13	67,314	47,946
Memphis	15.75	145,262	231,293
Houston	16.55	435,015	428,247
New York	16.95	224,520	43,146
Little Rock	16.00	18,502	41,613

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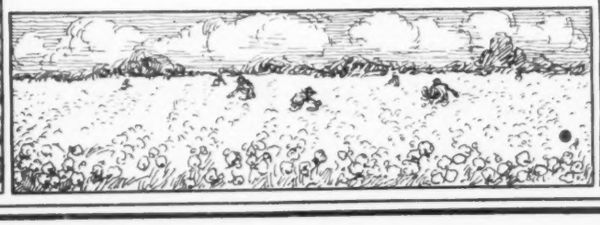

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Cotton—Continued

Fair Activity in South

Offerings of Cotton However Are Generally Limited

MEMPHIS, TENN., May 30.—The cotton market here is fairly active for small lots. Sales were slightly larger than during the previous week. Business is restricted owing to limited offerings and the poor quality thereof. Inquiry is good, although shippers are showing no eagerness. They are in comfortable position and are operating cautiously. Sellers are not pressing. Unsold stocks are in strong hands and owners seem to feel confident that higher prices will rule; they have been encouraged in this attitude by a further net advance during the week. Rapid progress is being made in getting the new crop underway in flood districts of Arkansas and some progress in Mississippi is reported. Some now claim that fully 90% of the cotton lands of Arkansas that were under water will be planted; water has receded from something like 80% of the Arkansas flood area, but it will be about a week before an equal percentage of the Mississippi flood areas is relieved.

Weather conditions have been favorable for germination and thousands of acres which were under water only a short time ago are now up to excellent stands; the percentage in Mississippi is smaller than in Arkansas. Naturally there is better feeling as to the possibility of a new crop but all realize that it is greatly handicapped at the best and because of this handicap and the fact that about half of the staple producing area of the United States is under it, there is a general disposition to predict wider premiums for staples. Low grades, in both staples and short cotton, which at one time were in good demand were rather hard to sell during the week—cotton which has been selling at 10 to 11c—but if any high grade staples changed hands during the week they were not reported. A lot of middling full 1⅛" brought 19½c, strict good ordinary and low middling, fairly bright, 11/16 to 1⅛" 13¼c, strict good ordinary, off color to blue, 1 1/16" 11¼c, low middling bright, 1 1/16" 15c, low and strict low middling just 1 3/16" 17.80, off color 15.80, strict good ordinary 1⅛" 14c.

Considerable inquiry for new crop delivery is developing and some forward business has been booked at the old crop basis. The weather during the week was favorable. Temperatures were right for cotton. About half of the drouth area in western Texas was relieved but the Atlantics are still needing rain although cotton is not yet suffering. There were further rains over wet areas of the central belt but they were more favorable than otherwise; a long dry spell following so much wet weather with the ground packed and cloddy, would be bad for the crop.

Staple Cottons Slow

Mill Buyers Anxious About Future But Resist Advances

BOSTON, June 1.—Notwithstanding a net advance in futures for the week ½c and an advance of as much more in shippers' asking prices on premium and extra staple cottons, the flat price of the latter on actual sales is practically unchanged, with the majority of buyers resigned to a hand-to-mouth policy of purchasing, at least until the market turns substantially in their favor. The Egyptian futures market failed to follow yesterday's advance in American futures, and shows a net loss for the week of ⅛ to ¾c on everything excepting new crop Uppers, which have advanced approximately ¼c.

While shippers claim to have little to offer in strict low middling and higher grades they are not asking the extreme advance quoted last week, and are not turning down bids on lower grades than middling in cottons shorter than full 1¼ in. where there is a difference in price ideas of no more than 25 to 50 points. It is difficult to get them to admit that the crop outlook for extra staples is any brighter than it was a week ago, yet previous exaggerated reports as to reduction of average planted due to the floods and scarcity of good seed are now admitted to have been fiction. It is now generally admitted that at least 50% of the flooded district in the Mississippi Delta will be planted to cotton, but the proportion of this to be planted to extra staples remains problematical.

While the majority of domestic mills using premium and extra staple cottons have now covered the bulk of their needs for the balance of the season, and are now operating only in a hand-to-mouth way on somewhat lower grades and shorter staples than they ordinarily use, there is little doubt but that they would be active buyers at prices 50 to 100 points below current minimums provided there were no likelihood of a further radical drop in values. Such small sales as

(*Continued on page* 146)

Market Statistics

Basis Middling

	Saturday May 28	Saturday May 21
10 markets average	16.00	15.58
Memphis	15.50	15.00

Premium Staples

First Sales from Factors Tables at Memphis

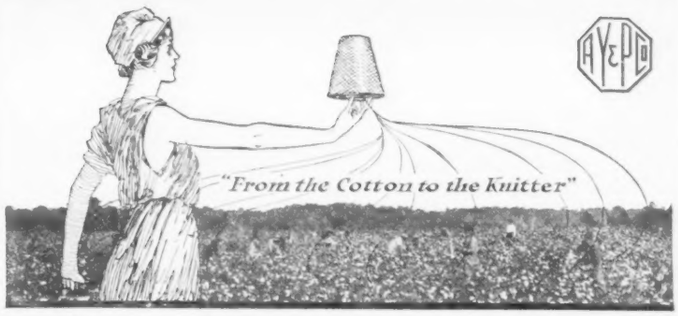
Grade Strict Middling	Prices Steady
1 1/8-in.	20½@21¼c
1 3/16-in., Nominal	24 @24¾c
1 1/4-in., Nominal	27 @29c

Current Sales

	For week	Prev. week	Week before
Memphis total	17,750	16,275	19,175
F. o. b. included	13,875	12,225	15,250
10 markets	63,456	46,952	44,265

Memphis Receipts, Shipments, Etc.

	For week	Last year	Year before
Net receipts	8,985	2,730	367
Gross receipts	24,553	14,187	4,280
Total since Aug. 1, net	793,761	734,189	425,189
Shipments	33,970	22,602	7,890
Total since Aug. 1	2,220,849	1,626,216	1,283,926
Total stock	151,123	234,061	23,500
Decrease for week	11,638	8,415	5,610
Unsold stk in hands of Memphis factors	50,000	87,000	.....
Increase for week	1,750	5,000	.....



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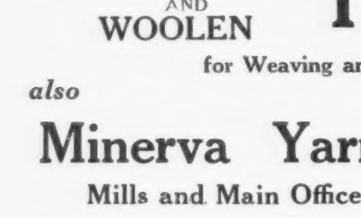

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WORSTED YARNS

Tops Continue Under Downward Pressure

Half Bloods Forced Down To $1.20 —Noils in Strong Hands on Low Price Level

BOSTON.—The general situation continues unfavorable to the topmaking industry. Strength in wools in the country and on the street has produced a better sentiment and yet in spite of this ½ blood tops have been sold for future delivery as low as $1.20 and fine tops at $1.32 or possibly below. There are no offerings of stock lots so that the low prices accepted are on distinctly new business. Some combers who have accepted business at $1.20 for ½ blood have repented their action and quote $1.23 the minimum on further business. The market is experiencing little or no demand for medium tops, the bulk of the new business being in fine and ½ blood with a little 58s and a smaller quantity of 46s.

The larger part of the noils held on Summer Street are in strong hands and the houses receiving them on contracts placed earlier in the year, although not able to sell at a profit at this time, are quite indisposed to cut prices with so thin a demand. Dealers' stocks are very small. A quick turn-over at a slight profit seems their chief objective. Some of them are able to do this quite successfully but all are met by low bids when they show samples to their mill friends. Noils taken in on either first or second quarter contracts cannot be sold at a profit at this time.

There is no sign of any price recovery. In some places fine noils can be bought as low as 70c and good ¼ bloods at 50c. In cashmere, camelhair, and alpaca business continues small but the materials in small supply hold firm. Bradford noils are well held and producers firm against low bids. America is not in the market at this time.

Top and Noil Quotations

Tops—Boston		Nominal
Fine	(64–66s)	$1.32–$1.35
Super 64s Aus.		1.50– 1.53
Half-blood	(60–62s)	1.20– 1.23
High ⅜ blood	(58s)	1.10– 1.13
Aver. ⅜ blood	(56s)	1.05– 1.08
Low ⅜ blood	(52–56s)	.98– 1.00
High ¼ blood	(50s)	.93– .95
46s		.87– .88
44s		.82– .83
40s		.80– .81
36s		.80– .81
Tops—Bradford		
Fine	(70s)	53½d
Fine	(64s)	48d
Half-blood	(60s)	44d
Half-blood, low	(58s)	41d
Three-eighths blood	(56s)	34d
Quarter-blood	(50s)	26½d
Cross-bred	(46s)	21d
Noils—Boston		
Fine		$.70– $.75
Half-blood		.63– .65
High ⅜ blood		.55– .60
Aver. ⅜ blood		.50– .55
Low ⅜ blood		.51– .52
High ¼ blood		.48– .50
46s		.45– .50
44s		.45– .50
40s		.45– .50

Fine Yarns Becoming Firmer

Spinners of Mixtures in a Good Position—Fine Top Stronger

PHILADELPHIA.

WHILE there is nothing definite to which one may point and state the yarn market as a whole has improved, there has been a conservative degree of improvement in several sections and there is now a more optimistic feeling than at the beginning of May. The belief is generally held that prices are now as low as they will go unless a drastic decline, which is not in prospect at present, develops in the wool market. There has been no change of importance in yarn prices within the last month, though demand was quiet during this period and in addition weakness was apparent in the raw material market, proving to many in the trade yarn prices will not decline if wools continue at the present level. Spinners' stocks are reported to have been reduced slightly during the last month due to curtailment.

Spinners in this section have curtailed production to off-set falling-off in sales during this time, so that weakness in prices caused by offerings of cheap spot lots is not anticipated as the result of lack of interest by manufacturers during May. This tendency is also apparent in contracts of small size placed this week, manufacturers in practically all instances being willing to renew contracts for 5,000 lbs. or less at the current price level asked by spinners. A number of renewals of this character have been reported by spinners on the basis of $1.25 for 2-26s quarter blood, going into duplicate bathing-suit orders.

Bathing-Suit Sales Improve

There has been a decided improvement in movement of yarn going to this class of manufacturers, with bulk of it being sold on this price basis, manufacturers specifying immediate delivery of a large part of the contract as they desire to get goods on jobbers' shelves as soon as possible. Other counts of outerwear yarns have been selling on a basis of $1.17½ for a good grade 2-20s quarter blood. There is a fair request for 2-40s and 2-50s French spun as used by manufacturers of knit goods to go into ladies' dresses. The volume of this business, however, is not large in pounds but is more profitable from the spinners' standpoint than other and more speculative counts and grades.

A more optimistic feeling in the market is also partly due to the situation of dress goods manufacturers. While demand for heavyweights has not been felt to any large extent by spinners of worsted yarns, that for woolen yarns used by this class of goods having been fair, the prospects for worsted yarns used by this trade are brighter than for several months, spinners and dealers anticipating an active call for 30s warp to be used in conjunction with woolen filling, going into goods of a suede variety for next fall and winter wear. Spinners are quoting 30s warp yarns of best grade at $1.85, three of the largest making this count naming this price early this week. Little dress goods business has been booked as yet by worsted spinners and factors in the market in close touch with this situation predict a fair volume of business during the next three months.

Men's Wear Yarns Slow

The reverse is true of men's wear. Spinners state bulk of heavyweight business has been placed in their opinion. This is in contrast with conditions at this time a year ago, when bulk of yarns for men's heavyweights was yet to be placed by manufacturers, this business coming to spinners during the latter half of the season. Spinners of mixtures which are largely used by men's wear mills in this vicinity are in a strong position at this time, having a good volume of advance business on thier books. At least one reports, this week, the refusal of further orders on several of their grades, having advanced their quotations of these to a level making sale improbable.

It is interesting to note in this connection that spinners report there is a lack of large supplies of fine top in the local markets, 60s and finer being difficult to locate in volume according to several who have been in the market for these grades recently. Going back of this situation we find that fine wools have not been arriving in this country from Australia at the normal rate for this time of the year, and this is a factor in bringing about the above conditions in the top market. Spinners of yarns using fine wools are predicting higher prices for yarns of these grades for this reason in the near future, particularly in view of the fact demand from dress goods manufacturers will be confined to a larger degree than heretofore to yarns made from finest Australian wools.

Fine Yarn Spinners Firmer

An actual occurrence this week will illustrate this condition. A broker sold a medium sized quantity of fine mixtures at a certain price and he immediately endeavored to cover this order with a spinner at three cents under the figure he had sold the yarn, this being his profit on the sale. The spinner quoted the dealer a price a cent higher than he had anticipated and thinking the spinner would come down to his idea he delayed placing the order for several days. When the dealer finally decided he would pay the price for this yarn he found the spinner now had advanced his quotation to him ten cents a pound. This spinner has a fair volume of forward business on hand and therefore in an independent position, especially when fine yarns are considered.

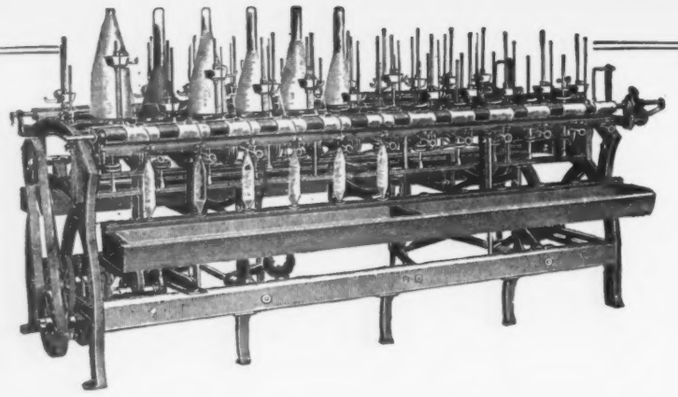
Reviewing the above developments the market assumes a somewhat brighter aspect than a month ago, although there has been no actual increase in sales with the exception of those to bathing-suit manufacturers. Prices are steady in the face of a dull market and in addition to this firmness may be transmitted to yarns by the steadier tone now apparent in wools. These, when considered with prospects for greater activity in certain trades, such as outerwear and dress goods during the next few months, furnish a basis for a conservative amount of optimism when the future is considered.

WORSTED YARN QUOTATIONS

(Corrected to Close of Business Wednesday)

Bradford System	
2-12s, low com. (36s)	95–1.00
2-16s, low com. (36–40s)	1.00–1.05
2-20s to 2-24s, low ¼ (44s)	1.07½–1.12½
2-20s to 2-26s, ¼ bld. (46–48s)	1.17½–1.23½
2-26s to 2-30s, ¼ bld. (48s)	1.27½–1.30
2-30s to 2-32s, ¼ bld. S. A. (46s)	1.30–1.32½
2-32s, ¼ bld. (48–50s)	1.32½–1.37½
2-20s, ⅜ bld. (56s)	1.40–1.45
2-26s, ⅜ bld. (56s)	1.45–1.50
2-36s, ⅜ bld. (56s)	1.50–1.55
2-32s, ½ bld. (60s)	1.65–1.70
2-36s, ½ bld. (60s)	1.70–1.75
2-40s, ½ bld. (60–64s)	1.75–1.80
2-50s, high ½ bld. (64s)	1.90–1.95
2-50s, fine, (66–70s)	2.00–2.05
2-60s, fine, (70s)	2.65–2.70

French System	
20s, high ¼ bld. (50s)	1.35–1.40
20s, ⅜ bld. (56s)	1.45–1.50
30s, ⅜ bld. (56s)	1.55–1.60
30s, ½ bld. (60s)	1.70–1.75
40s, ½ bld. (60–64s)	1.85–1.90
50s, (66–70s)	2.10–2.15
60s, (70s)	2.70–2.75
Knitting Yarns in Oil (Bradford)	
2-20s low ¼ bld. (44s)	107½–1.10
2-18s to 2-20s ¼ bld. (50s)	–1.20
2-26s, ¼ bld. (50s)	–1.26
2-30s, ¼ bld. (50s)	–1.30
2-20s, ⅜ bld. (56s)	1.40–1.45
2-20s, ½ bld. (60s)	1.70–1.75
French Spun Merino White	
30s, 50–50	1.30–1.35
30s, 60–40	1.42–1.45
30s, 70–30	1.54–1.59
30s, 80–20	1.65–1.70



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Wind from Cop, Skein or Bobbin

Over 1,900 in use by Hosiery Manufacturers

IMPROVED UPRIGHT SPOOLERS

To Spool from Cop, Skein or Bobbin; Doubling Spoolers for Doubling two, three or more ends into one; Upright Quillers, Quill from Cop, Skein or Bobbin. Ring Dresser, Spooler and Reel Spindles, Cop Skewers, Spooler Guides, Bolsters and Steps Made and Repaired at Short Notice.

GEO. W. PAYNE CO., Office, 102 Broad St., PAWTUCKET, R. I

(Est. 1865, Inc. 1903)

CHARLES W. PAYNE, Pres. CLINTON F. PAYNE, Sec'y and Treas.

CHARLES COOPER CO.

Machine and Needle Works

BENNINGTON, VERMONT

G. H. ROGERS, Representative, 877 Warren St., Albany, N. Y.

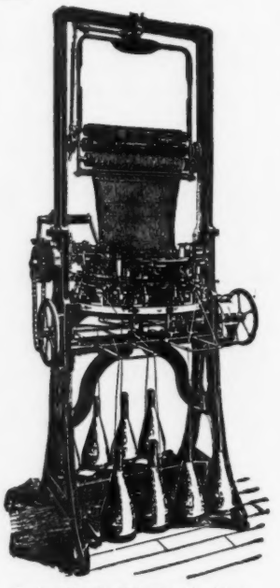
Spring and Latch Needle KNITTING MACHINERY

STANDARD FOR

PLAIN RIBBED, CIRCULAR AND FLAT UNDERWEAR SHIRT CUFFS DRAWER BOTTOMS

Rib Cuff Cutting Machines
Burr Wheels and Burr Blades
Balmoral Collarette Machines
Automatic Rib Cutting and Folding Machines

SPRING AND LATCH NEEDLES



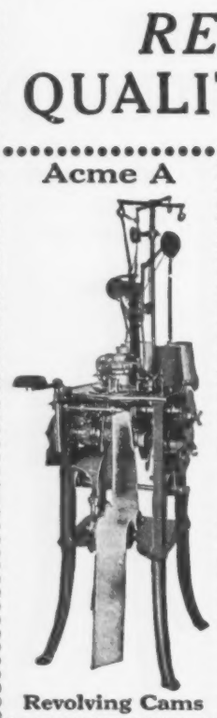
Spring Needle Rib Top Machine

Agents—Mellor, Bromley & Co., Ltd.. Leicester, Eng.

Sole Agents for China—Elbrook, Inc., 50 Peking Road, Shanghai, China

NEEDLES and MACHINES OF *RECOGNIZED* QUALITY and WORTH

Acme A



Revolving Cams

are the

ACME PRODUCTS

made for

SERVICE

in the

KNITTING ROOM

Ask those who use them

See also CONSOLIDATED TEXTILE CATALOG

Acme D

Revolving Needles

Acme Knitting Machine and Needle Co. Franklin, N. H.

Established 1870 Incorporated 1890

Get Repeat Orders by Using

Crane Spring and Latch Needle Knitting Machinery

SOME CRANE FEATURES

Patent removable hardened Wing Burr Wheels.
Patent Thread Stop Motion can be fitted to 20 in. and 32 in. frames and are specially adapted for making fine Jersey Cloth and Stockinet.
Our flat machine is adapted for knitting collarettes.

SPRING NEEDLE UNDERWEAR MACHINE WITH AUTOMATIC TAKE-UP

This machine is made in sizes from 13" to 26" in diameter of any desired gauge, the number of feeds depending on the size of cylinders. Also built in sizes from 2½" to 32" in diameter for the production of a great variety of fabrics.
Aside from the feeds for plain fabrics, the stockinet, elderdown and astrachan feeds are superior to any on the market.

IMPROVED AUTOMATIC COLORED PLAIN STRIPER

Made in sizes from 7⅝" to 20⅝" inclusive, of any desired gauge; these measurements being back to back of cylinder needles.
The fabrics from this machine are used for bathing suits, theatricals and athletic goods.
These machines are second to none on the market.
The Crawford stop-motion is applied when requested.

"It Pays to Use Good Machines and the Best Are None Too Good."—Our Motto

LET US SEND YOU FURTHER FACTS See also CONSOLIDATED TEXTILE CATALOG

CRANE MANUFACTURING CO., Lakeport, N. H.

Worsted Yarns—Continued

Weaving Yarns Still Slow

Industry and Market Flat Against Adverse Conditions

BOSTON.—The worsted yarn industry is still up against adverse conditions and the market for yarns continues under the influence of sales of standard white yarns at low prices. In specialties business is substantial and prices favor the sellers. Volume of business on white weaving yarns is very unsatisfactory and spinners are so hard put to keep their machinery going that they are usually willing to cut prices to the very limit in order to get an order. The goods market is still holding back a considerable amount of business in worsteds that will sooner or later have to be placed. The goods opening at the beginning of the year was not productive of any general placing of orders although quite a number of the larger mills who do their own spinning did fairly well.

The independent spinners who buy tops or wool and then sell the yarns to mills who have no spinning machinery are as badly off as they were at the beginning of the year. The situation is very little if any better than in England and the Continent. An English authority who has been making a study of Continental conditions states that the German nationalization of industry with its concentration of units in the horizontal structure has lowered costs; further intensive production in different countries on a three-shift basis has further tended to lessen interest charges. The industry in general however is faced by harassing problems and is also entirely lacking in essential data of production.

In the Bradford market the demand for crossbred yarns for weaving purposes continues below normal but of late there has been a slight increase in Continental demand. Competition for business continues very severe and quotations as a consequence are quite irregular. The fine count section of the market is still lacking manufacturing support. Reports indicate an abnormal relation between selling prices and cost of production although for some time past Bradford top prices have been based upon Australian rather than on London values. Spinners, it is said, are in a worse position than topmakers from the point of view of profitable turnover. Recent developments have created a feeling among yarn users that they ought to be able to buy on a lower basis of value.

BRADFORD YARN PRICES

	s	d
2-16s, 36s	2	2
2-24s, 44s	2	5
2-36s, 58s	4	4
2-48s, 64s	5	5
2-60s, 70s	6	4

John J. Hosey, Philadelphia. In a schedule filed in the U. S. District Court here assets were given as $90,500 and liabilities at $846,781.

Engineers Visit Plant of Mohawk Carpet Mills

Members of the Society of Engineers of Eastern New York and their wives and friends to the number of 125 were guests on Thursday, May 26, of the Mohawk Carpet Mills, Inc., Amsterdam, N. Y. The party gathered at 2 o'clock at the McCleary division cafeteria.

The different processes of spinning and weaving the five popular types of floor covering were briefly explained by John V. Smeallie, publicity manager of the mills who illustrated his talk with raw materials, sundries and supplies used in the manufacture and swatches of 25 of the 75 fabrics woven by the Mohawk mills.

The visitors were divided into squads and under the guidance of persons versed in the many operations were conducted through both the McCleary and Shuttleworth divisions where some of the major steps were explained in detail by superintendents and foremen.

Eastern Connecticut Mills Exhibition

Prentice W. Chase, secretary of Eastern Connecticut Mills Association, is authority for the statement that allocation of space for the second biennial textile exhibition and style show, to be staged in the Danielson (Conn.) Armory, June 16, 17 and 18, promises to tax the available floor space. Many of the mills represented in the association will make elaborate displays of their products, in addition to the exhibits of textile machinery and supply houses.

The following mills will have exhibits at the Danielson Textile Exhibit, to be held at Danielson, Conn.: Aldrich Brothers Co., Moosup, Conn.; Ashland Cotton Co., Jewett City; Lorraine Mfg. Co., Westerly, R. I.; Lawton Mills, Inc., Plainfield, Conn.; Quinebaug Co., Danielson; Wauregan Co., Wauregan, Conn.; Hygenic Fiber Co., Versailles, Conn.; National Rhrea Co., Putnam, Conn.; Central Worsted Co., Central Village; American Woolen Co., Moosup; Farnsworth Mills, Inc., Central Village; Paco Mfg. Co., Danielson, Conn.; and the Assawaga Co., Dayville.

Stocks of Rayon in Bonded Warehouses

WASHINGTON, D. C.—Stocks of rayon yarn held in bonded warehouses in the United States at the end of April amounted to 1,021,688 lbs., valued at $711,684, as compared with 1,052,211 lbs., valued at $739,027 at the end of March, 1927, and 1,828,041 lbs., valued at $1,904,351, at the end of April, 1926, according to the Department of Commerce.

The figures for rayon waste and yarns made from waste are as follows: April, 1927, 1,014,596 lbs., $425,157; March, 1927, 971,046 lbs., $420,021; April, 1926, 707,357 lbs., $430,117.

Pocasset Worsted Company, Inc.

Worsted Yarns

Office and Mills — Thornton, R. I.

WORSTED YARNS
BRADFORD STEEL SYSTEM
GRAY AND FANCY SHADES
TWISTS AND MIXTURES
WEAVING-KNITTING

WARNER J. STEEL
Successor to EDWARD T. STEEL & CO.
Mills and Office — BRISTOL, PA.

WORSTED AND MERINO
JD FRENCH SPUN YARNS
FOR KNITTING AND WEAVING
Manufactured by
JULES DESURMONT WORSTED CO.
WOONSOCKET, R.I.

Philadelphia and Southern States—Thomas H. Ball, 1015 Chestnut St., Philadelphia, Pa.
New York—Charles Heyer, 1 Madison Ave.
Boston and New England States—Messrs. H. W. Dwight and Walter Skerry, 10 High St., Boston.
Los Angeles, Calif.—Harvey J. Masteller.

Centredale Worsted Mills
Centerdale
R. I.
WORSTED YARNS

RAYON TOPS·NOILS PICARDED
Spunrayarn and Rayon-Worsted Blends
ABEECO MILL, INC., 505-5TH AVE., NEW YORK CITY
CANADIAN REPRESENTATIVES: WM. B. STEWART & SONS, LTD., TORONTO-MONTREAL

Do you realize the cross-dyeing possibilities of Celanese-and-Silk mixtures in Crepe-de-Chines?

MANY new and attractive fabrics can be produced by using warps of Celanese and filling of pure silk. These fabrics are *really new* fabrics and therefore find a ready and profitable market.

With the same "grey" construction, a vast range of color combinations with bright or dull finishes can be obtained.

In the two-tone effect, the face is dyed one color and the back a different color. A bright or dull finish can be obtained in the process of dyeing.

If solid colors are required, the face and the back of the fabric are dyed the same shade, and, similarly, a bright or a dull finish can be obtained as desired.

Celanese brand yarn is highly elastic and remarkably durable; and it has unique hygienic qualities. The dyestuffs used for dyeing Celanese brand fabrics give colors that are unusually fast to sun, suds, salt-water and perspiration.

CELANESE
REG. U.S. BRAND PAT. OFF.
YARNS

CELANESE CORPORATION OF AMERICA
(Formerly American Cellulose & Chemical Mfg. Co. Ltd.)
15 EAST 26TH STREET, NEW YORK
WORKS AT AMCELLE (NEAR CUMBERLAND) MARYLAND

CELANESE is the registered trademark, in the United States, of the Celanese Corporation of America, to designate its brand of yarns, fabrics, garments, etc.

RAYON AND SILK YARNS

Thrown Silk Unchanged

Some Covering Against June Requirements

A slightly easier trend to the raw silk market which permitted the naming of some attractive prices on 3 thd and 4 thd crepes brought in some fair sized business for June delivery. Generally speaking the market was rather quiet, however, and buying of the Crack XX 4 thd crepes did not make up for the falling off in interest in georgette. Mills are still going ahead with the weaving of georgette but caution is playing a predominant part in manufacturers' ideas and schedules are being reduced in a majority of cases. A few contracts for the heavier crepes were heard for deliveries running into August but these were the exception. The state of the market can be determined from the fact that in the case of several large throwsters, an entire suspension of work has been put into effect.

Slightly higher prices on Canton 3 thd and 4 thd put a stop to the buying movement noted in the previous week. Tram was also dull with the hosiery trade showing no disposition to operate

(90 days basis)

Japan Organzine 2 thd Grand XX in skeins	$7.30
Japan Tram 3 & 4 thd in skeins	6.25
Japan Tram 5 thd on cones	6.20
Japan Crepe 3 thd X on bobbins	6.70
Japan Crepe 3 thd Crack XX on bobbins	7.00
Japan Crepe 4 thd X on bobbins	6.60
Japan Crepe 4 thd Crack XX on bobbins	6.90
Canton Crepe 3 thd NS 14/16 on bobbins	5.40
Tussah Tram 2 end on cops	3.60

Spun Silk Quiet

Good Quantities of Singles Are Going into Work

Manufacturers showed little interest in placing new business last week and the market was extremely quiet as a consequence. A very moderate amount of filling in buying was going on but manufacturers found no encouragement to place any additional forward orders for fall delivery with the fabric market what it is today. Charmeuse is being bought and will be used liberally. Prices, due to the fact that stocks of this quality are plentiful, do not permit anything more than bare replacement cost so that many mills that contemplated running this number have decided against it. Prices are as follows:

(2%—30 days)

60—2	$5.40	40—2	$5.05
50—2	5.25	62—1	4.30

Wm. Beattie Represents Monarch Silk

William Beattie, who has been identified with the Philadelphia and Pennsylvania yarn trade for several years, has become connected with the Monarch Silk Co., Philadelphia. He will represent them in the sale of their silk, rayon, and combination yarns, in the Pennsylvania State trade, and also the south.

APRIL RAYON IMPORTS INTO U. S.

Country	Rayon Lbs.	Waste $	Yarns Made From Waste Lbs.	Yarns Made From Waste $	Yarns Lbs.	Yarns $
Austria	.....	.....	109	297	28,629	19,394
Germany	64,400	33,832	.....	.....	151,709	148,253
Italy	81,504	12,678	127	150	637,973	474,774
Switzerland	117,631	21,374	6,253	5,276	43,101	42,553
United Kingdom	989	62	.....	.....	281	505
Canada	12,772	1,490	.....	.....	17,917	13,855
Belgium	.....	.....	.....	.....	22,046	13,900
France	.....	.....	.....	.....	213,598	164,676
Netherlands	.....	.....	.....	.....	402,750	333,972
Japan	.....	.....	.....	.....	316	230
	277,296	$69,436	6,489	$5,723	1,518,320	$1,212,112

Price Advance In Rayon Is Unlikely

Producers Say They Contemplate No Change in Existing Levels —Business Fairly Active

Now that the rayon market is running along on a satisfactory and stable basis, rumors of price changes are being heard less and less. Following the last advance there were persistent reports that another rise was contemplated but nothing transpired at the time. Some weeks ago another rumor of an advance on July 1 received some attention but the matter seems to have died a natural death. With matters in such a comfortable state as they are at present, it is not thought that the larger producers will tempt the fates by moving up their price levels. Business is coming in at a good rate and contracts on sellers books call for substantial quantities until September. To put their quotations up another 5c a pound might do more harm than good particularly when the import figures for March and April are scanned.

In spite of the lowest level of prices for rayon in the history of the trade, lower even than prewar, foreign firms managed to send over here and sell close to 1,800,000 lbs. during March. The April figures, recently released indicated a total of 1,500,000 lbs. It is entirely likely that these totals would be increased if prices were moved up at all for even 5c a pound is a substantial sum when taken at the current rates of exchange for Lire and Francs.

Experiments with silk and rayon materials being conducted by silk firms are progressing satisfactorily. The present condition of the silk fabrics market is forcing manufacturers to work constantly for ways and means of bringing down their costs. Yarns of the Bemberg and Celanese type are being used mostly at present, but some mills are trying out viscose type yarns which have the advantage of a lower cost. That price alone does not entirely determine the matter, however, can be gleamed from some of the store offerings.

Rosanna Mills, Inc., Chester, Pa., manufacturers of plushes, velvets, velours, etc., have installed additional looms, increasing their capacity. It is reported this concern is now contemplating installing equipment that will double their present facilities. They also operate a plant at Upland, Pa.

DOMESTIC RAYON PRICES

Denier	"A"	"B"	"C"
55	$2.45	$2.30	$2.20
65	2.35	2.15	2.05
75	2.50–2.55	2.30–2.35	2.20
80*	2.60	....	....
85	2.15	2.00	1.90
90	2.30	2.15	2.05
100	2.15	2.00	1.90
100*	2.25	....	....
120	1.80	1.70	1.60
125	1.75	1.65	....
130	1.70	1.60	1.50
140	1.60	1.50	1.40
150	1.50	1.45	1.35
150*	1.75	....	....
170	1.45	1.40	1.25
170*	1.70	....	....
200	1.45	1.40	1.25
200*	1.70	....	....
250	1.35	1.30	1.25
300	1.30	1.28	1.25
450	1.20–1.25	1.20	....
600	1.15–1.25	1.20	....
750	1.15	....	....
900	1.15–1.20	....	....

* Multi-filament

CELANESE

Denier		Denier	
45	$4.25	170	$2.85
75	3.75	200	2.75
100	3.65	300	2.70
150	2.90		

BEMBERG (Cuprammonium)

Denier	Filaments	Price
40	30	$4.25
60	45	3.65
80	60	3.50
100	75	3.25
120-A	90	2.90
120-B	90	2.35
150-A	112	2.50
150-B	112	2.15
180	135	2.30
240	180	2.25
300	225	2.25

Glanzstoff Site Selected

To Build First Unit at Elizabethton, Tenn., to Cost $7,000,000

It is authoritatively announced that a contract has been signed with the American Glanzstoff Corp., recently incorporated for $7,000,000, to locate a rayon plant near the site of the present Bemberg Corporation plant, in Elizabethton, Tenn. It is reported that the initial expenditure will amount to $7,000,000 and that 4,000 operatives will be employed, involving two units.

The new plant is on the Watauga river and within the corporate limits of Elizabethton, but Johnson City and Elizabethton have cooperated in securing concessions demanded by the corporation. This announcement follows upon the heels of the statement that the Bemberg corporation will commence immediate construction of another unit of their plant. One unit is completed and 1200 operatives are now employed. By Aug. 1 it is expected that this unit will be running to full capacity, employing about 1700. According to a recent announcement, one unit each year will be built until a total of five has been reached, with an aggregate expenditure of approximately $15,000,000.

The American Glanzstoff Corp., organized under the direction of the Verinigte Glanzstoff Fabriken, Elberfeld, Germany, has the financial backing of the following banking concerns:

Texeira de Matteos, Amsterdam; Schlesinger, Trier & Co., Berlin; as well as Lehmann Bros. and associates, of New York.

It is reported that the product of this new Glanzstoff plant will be made from wood pulp, under the Viscose process. E. C. Alexander and Dr. J. O. Woods, of the Elizabethton Chamber of Commerce, were prominently identified with the negotiations resulting in the selection of the proposed site. It was reported that Wolf, Strauss & Co., 65 Madison Avenue, New York, will be in charge of the sale of the plant's product.

Rayon Notes From Britain

Special to TEXTILE WORLD

Advance totals of exports of cotton and rayon mixtures for the month of April amount to 3,961,864 sq. yards against 3,626,856 sq. yards in April, 1926. Decreases are shown in takings by India and China and increases by Canada, Australia, Dutch East Indies, Brazil, British West Africa and Egypt. The total exports for the year to date are 22,001,322 square yards against 17,415,268 sq. yards in the same period of last year.

Exports of rayon and wool mixtures during April totalled 68,371 sq. yards against 74,059 sq. yds. De-

Dyed & Natural

Raw & Thrown

RAYON

Cops—Cones—Spools

Prompt—Efficient—Reliable

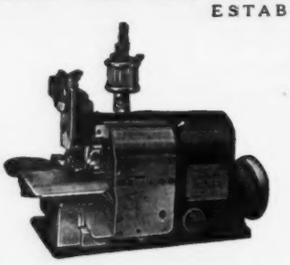
BERGER RA'YARN CO.

57 East 11th Street
New York

Stuyvesant
2375
2376

MERROWING

ESTABLISHED 1838



Over 200 varieties and modifications of machines for trimming, seaming, overedging and ornamenting all sorts of fabrics.

Special machines for Flat-Butted-Seaming ends of piece goods, saving cloth and labor in subsequent processing.

Let us show results on swatches of your own fabrics.

MERROW
REG. TRADE MARK

See also CONSOLIDATED TEXTILE CATALOG

THE MERROW MACHINE COMPANY
14 Laurel St., Hartford, Conn., U. S. A.

LA SOIE DE CHATILLON

Soc. An. Italiana—Capital 200,000,000 Lires—Milan, Italy

RAYON (Viscose)

Daily Output 50,000 lbs.

"SERIS"
Artificial Schappe

Artificial Straw

"CHATILAINE"
Artificial Wool

Artificial Horsehair

Sole Selling Agents and Distributors U. S. A.

59 Pearl St.
New York

ASIAM INC. Whitehall 8572-8389

Granite State Needle Co.

George W. Mayo, Pres. and Treas.
LACONIA, N. H.

Manufacturers of

First Quality Latch Needles

For All Standard Makes of Machines
"We Make The Best"

A Specialty Made of Banner and Scott & Williams Latch Needles

See also CONSOLIDATED TEXTILE CATALOG

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726 River St., Troy, N. Y.

JOHN L. BARTRAM CO.
James Bldg., Chattanooga, Tenn.

JOHN L. BARTRAM CO.
American Bank Bldg., Greensboro, N. C.

WILDT & CO., LTD.

LEICESTER, ENGLAND

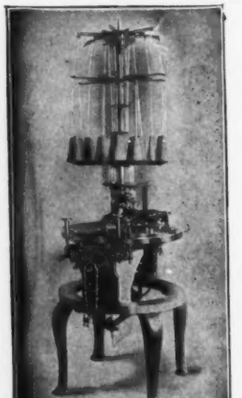
WE BUY

KNITTED FABRICS

ALL KINDS

IN LARGE QUANTITIES

Cable Address—Wildt, Leicester



SWEATER MACHINE

Sweater and Toque Machinery

We announce to the knit goods trade that both our new Latch Needle Sweater and Toque Machines, after severe and protracted tests, have proven unqualified successes.

Sweater machines knit plain, half, and full cardigan, stripe, rack and have separating course.

Toque machines automatically stripe three colors on ribbed fabrics.

TOMPKINS BROS. CO.
SYRACUSE - - N. Y.
Established 1846

See also CONSOLIDATED TEXTILE CATALOG

Royersford Needle Works, Inc.

The largest manufacturers in the United States of

SPRING-BEARD NEEDLES

Sinkers, Dividers, Etc., for Knitting Machinery

OUR NEEDLES ARE GUARANTEED THE BEST

730 Walnut Street
ROYERSFORD, PA.
Ferdinand Heller, Treas.

WINDERS
Cop and Skein
For Wool
Cotton or Silk

HARLEY-KAY, LIMITED
BUILDERS OF HIGH GRADE KNITTING MACHINERY
GEORGETOWN, ONTARIO

YARN WAXERS
Mill
Accessories

BECK RAYON CO.

FAST COLORS

FAST AND RELIABLE SERVICE

RAYON
for KNITTING and WEAVING

200 Greene St., New York

NEEDLES

BECKERT CONTINENTAL

For All Types of Knitting Machines

E. W. S. JASPER, 71 Murray Street, New York
Telephone—Walker 1536

Rayon and Silk Yarns—Continued

mand from China was almost negligible and Australia shows up poorly, while improvements are recorded by Canada and United States. Total exports to date are 619,696 sq. yards against 487,012 sq. yards.

* * *

We have received a copy of the reports presented to the International Economic Conference at Geneva on the subject of the rayon industry and as these do not include any matter directly written by representatives in either the United States or Great Britain, we have carefully examined same from the point of view of the British industry. Copies of the memorandum will no doubt have been circulated in the United States and it will have been noted that it consists of a long summary written by the Italian Rayon Association followed by smaller reports from France, Germany and Poland.

From the British and American point of view, it might be said that the document is a moderately successful effort to present correctly a difficult subject, but that naturally the conditions in both Britain and America are not fully appreciated. It is admitted that the figures given are subject to a large margin of error and the pre-war totals of production are probably largely incorrect. It will, however, serve no useful purpose to study the position then as we are more concerned with the present state of the industry and the possibilities of the future. For the same reason it is unnecessary to attempt to dispute the history of the industry as given by the Italian reporters. The statement that the present production of acetate silk was approximately 2% of the total rayon output was probably true when the report was prepared last year, but today a careful estimate shows that slightly over 5% of the world production is by the acetate process. It is, however, on the question of customs tariffs where the report is most misleading as it is upheld that the British duty was imposed "with a view to helping the industry which was making slow headway." Your correspondent would like to state in reply to this that the duty was hotly contested and contested most strongly by the rayon producers here, that the industry was never in a better condition than at the time of the imposition of the duty, that the duty was imposed almost entirely from the point of view of revenue raising and largely on the mistaken idea that rayon was a luxury. Again, as predicted, the imposition of the duties caused a disturbance in the industry and an actual reduction in consumption here which has scarcely yet been put right and while on the whole the duties are working satisfactorily now, they have caused a number of troubles, which are the direct result of placing a duty on rayon whilst leaving other textile manufactures free.

Raw Silk Lower

Heavier Arrivals Make for Lower Levels and Easier Situation

The local raw market was moderately lower last week with a slight easing in the situation as regards spot deliveries. The warp sizes continued fairly scarce for immediate but were available in quantity for second half of June and spot prices did not reflect the actual conditions, but took their cue from the future market. Buying was light and manufacturers reiterated their belief that lower quotations would rule during the latter half of June and in July. They are taking on silk for later delivery only when the price comes within their range as to ability to pay which is still somewhat below the present market.

The Canton grades stiffened up early in the week with the 14/16 holding at $4.25 and the 20/22s at $3.95. These prices represented the levels for sixth and seventh crop silk which is superior in quality to the new season silk. The first and second crops are reported to be poor in quality, but prices are lower by 15c a pound than the old season silk and mills are showing more interest in the lower priced lots. Quotations are as follows:

(90 days basis)

Japan Filature,	Grand XX	13/15	$6 25
Japan Filature,	Crack XX	13/15	5 90
Japan Filature,	Double X	13/15	5 70
Japan Filature,	Best X	13/15	5 60
Japan Filature,	X	13/15	5 57½
Japan Filature,	Best No. 1/X	13/15	5 55
Canton Filature,	New Style	14/16	4 20
Canton Filature,	New Style	20/22	3 95
Tussah Filature,	8 cocoon		3 00

SUMMARY OF SILK CABLES

Saiyu Yokohama	1480 Yen
Exchange at 3 m/s	47.00
Cost C. I. F. New York	$5.56

Yokohama prices showed no change at all last week, remaining at 1480 Yen all during the period. Transactions were rather large amounting to about 6,000 bales. The principal part of the buying appeared to come from a willingness to cover sales due to an easing in exchange to 47.00 which was the low point of the recent dip. The prompt decline again to 47.00 following its rally to 47 5/8 points to the possibility of still lower rates and calculations will have to take this contingency into account. The Bourse showed no great amount of strength which is surprising in view of the exchange situation. Transactions on the Bourse were rather large with prices for the spot and new season months slightly under or on a par with the open market.

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Mercerized Cotton twisted with Raw Silk

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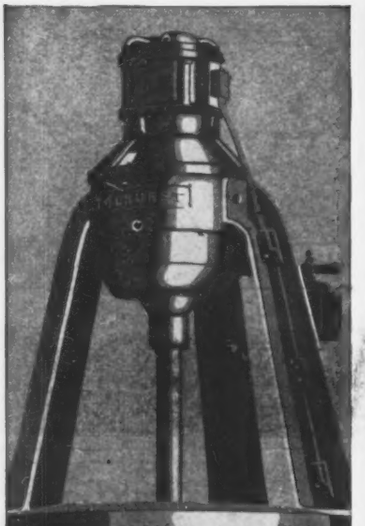

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Southern Representative: Fred H. White, Independence Building, Charlotte, N. C.
Canadian Representative: W. J. Westaway Co., Westaway, Bldg., Hamilton, Ont., 275 Craig West, Montreal, P. Q.

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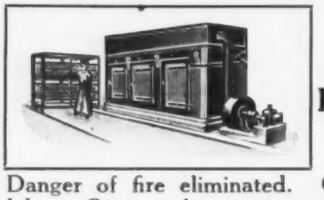

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WOOL AND SUBSTITUTES

Laps and Threads Sustain Mill Waste

Australian Drawing Sells at $1.20 and Single Threads at 85c—Woolen Rags Firm

Prices on reclaimed wools are on a steady and attractive basis. Business is a little better though rather unequally distributed among producers. A wide range of substitutes is seen but the bulk output is on white, light and bright colored fibers. Woolens seem to be taking on additional activity and this is a favorable feature for the reworked wool industry. Export demand for cheap rags continues covering fine and coarse dark merinos, black serge, dark worsteds and similar rags.

Higher values recently registered on several graded rags is viewed by some consumers as a mere flash in the pan and quite impermanent in character. Said a reclaimed wool manufacturer "Some little demand arose for light hoods and graders forthwith began to buy mixed softs and holders of the mixed rags at once put up their prices. There is nothing in the situation as I see it to warrant any sustained advance either in mixed or graded rags. The general tendency in textile raw materials is downward and the rag market cannot extricate itself for any length of time from the general movement." Business for recovered materials is coming in very slowly.

The Dewsbury rag market is still clouded by uncertainty but for the first time in several weeks advances have been seen on two or three important rags notably colored Berlin stockings which have been marked up five shillings per cwt., the best black a similar amount and faded black three shillings per cwt. Merinos and serges continue quiet. The market there maintains relatively high prices on black and brown serges offering an opportunity to the American exporter, but blue serges are about 1c per pound lower than in the American market. Imports of woolen rags into New York for the month of March totalled 805,000 lbs. From England came 618,000 lbs. at 27c and from Germany 92,000 lbs. at 22c.

For the best white soft waste there continues spotty mill demand but the prices obtained for this material are very satisfactory. A fairly substantial sale of fine white drawing lap, 70s-80s Australian was made at $1.20. The best drawing lap from domestic wool is held firm by one of the large producers at $1.15 which is 5c per lb. more than similar wool on a clean basis. The best white threads are doing a little better in price being quoted 78-80c with 83-85c for the best single threads. There is little call for colored wastes.

Are 4s and 5s Improved Wools?

Case Likely to Be Argued Before Court of Customs in Near Future

BOSTON.

THE U. S. Court of Customs Appeals handed down a decision Saturday, April 16, affirming the action of the lower court which by a majority decided against the government contention that Argentine 6s was a wool improved by admixture of English blood and so dutiable under paragraph 1102 of existing tariff at 31c per pound clean content.

As no Certificate of Importance was filed at the time the case it is understood could not be carried to the Supreme Court, but the Government attorney, May 14, filed a brief with the Court rendering the decision, asking for a rehearing. Counsel for the importers also filed a brief, May 24, opposing a rehearing. The matter is still pending.

In the meanwhile there are three or four lots of wool of this description held in bond in Boston and two or three consignments on their way from Bradford. If a rehearing of the case is denied the wools in bond and afloat may probably be placed in the carpet wool class by the appraisers at the several ports. In such an event it is likely that the government will seek a new test case and filing a certificate of importance leaving the way open for a final appeal to the Supreme Court if such becomes necessary.

As foreseen by many in the wool trade the placing of Argentine 6s in the carpet wool class has opened the door for a consideration of the actual status of Argentine 4s and 5s as to whether these wools have actually been improved by admixture of merino or English blood. The Bigelow-Hartford Carpet Co. has protested payment of clothing wool duties on Argentine 4s and 5s and the case has been set tentatively on the docket of the U. S. Court of Customs, Boston, for Wednesday, June 8.

If a rehearing on Argentine 6s is granted this will probably throw the new protest on 4s and 5s over to a much later date. In any event the preparation of briefs covering the higher grade proposition is likely to be sufficiently exacting to set back the case to some later date. The government will have to prove apparently that Argentine 4s and 5s are wools improved by the admixture of English blood. Evidence of English blood in the sheep is apparently not sufficient. This seems to be stated very clearly by Associate Justice Barber of the U. S. Court of Customs Appeals in the ruling handed down April 16: "If Congress had intended that wool produced by sheep possessing English blood should be excluded from paragraph 1101 it were easy to have said so, but did not."

Since the above was written, Waterhouse and Lockett, counsel for the Bigelow-Hartford Carpet Co. announce that the U. S. Court of Customs Appeals has refused the Government a rehearing, and that this denial disposes of the case.

Wool Market Improves

No Substantial Decline in Values Considered Likely

BOSTON.—Sentiment in the wool district is developing in favor of higher prices. Whether any increase in values would check mill purchasing is rather problematical but as manufacturers have for a considerable period been favoring domestic wools in their manufacturing processes it is considered that an advance of 3-5% per clean pound would do little or nothing in the way of checking purchasing. The demand for wool is broader nor is it necessary to make concessions in order to effect sales. In spite of the rather unsteady situation in Ohio and other fleece wool districts notable strength in other sections, particularly in Texas wools, more than offset this apparent weakness.

Most of the big wool houses look for a rather stable market during the next few months. The trade however is not out of the woods by any means. The Jericho clip which was purchased last season at 34c is still in part unsold and cannot be sold at this time at a profit. The limited amount of old clip wool found on Summer Street is going at low prices and this fact will perhaps assist Eastern buyers in their attempt to make favorable purchases of the new Ohio clip which is estimated at around 15,000,000 pounds.

The fleece wool section of the market is lagging behind. Not much of the Ohio wool has yet been purchased and prices at which the limited amount of the old clip is being sold suggest that the growers will have to be more moderate in their views if they desire to make any substantial sales. The Ohio ¼ blood has been sold recently at 40c and one dealer stated that sales have been made at 39½c. For several weeks past the fleece wools have been conspicuously easy in price.

Texas wools continue in the limelight. Further purchases were made by Boston houses at the Kerrville sale paying 40-40½c for 12 months and 31½-32c for 8 months wool. Texas wool is said to be in excellent condition

Wool and Substitute Quotations

(Corrected at close of business on Wednesday)

WOOL

Ohio, Pennsylvania and West Virginia

Fine delaine	.42—.43
Fine clothing	.34—.35
½ blood	.42—.43
⅜ blood	.41—.42
¼ blood	.40—.41

California (Scoured Basis)

Northern, 12 mo.	.98—1.00
Southern, 12 mo.	.85— .90

Texas (Scoured Basis)

Fine 12 mo.	1.05—1.10
Fine 8 mo.	.88— .93

Pulled—Eastern (Scoured Basis)

A.A.	1.05—1.08
A-Super	.90— .93
B-Super	.83— .85
C-Super	.70— .73

Montana, Idaho and Wyoming (Scoured Basis)

Staple fine	1.05—1.08
Do. ½ bld.	.98—1.00
Fine & fine medium	.98—1.02
⅜ blood	.88— .90
¼ blood	.78— .80

Mohair—Domestic

Best combing	.75—.80
Best carding	.65—.70

Mohair—Foreign (In Bond)

Turkey Fair av.	.43—.44
Cape Firsts	.43—.45

Foreign Clothing and Combing (In Bond)

Scoured Basis—Cape:	
Super 12 months	.95—1.00
Super 10-12 months	.98— .92
Australian:	
70s	1.07—1.10
64s	.95— .98
58—60s	.82— .85
Grease Basis:	
Montevideo:	
58—60s	.41—.42
56s	.39—.40
50s	.35—.36
Buenos Aires:	
4s, 40—44s	.28—.29
5s, 36—40s	.26—.27

Foreign Carpet (Grease Basis in Bond)

China: Combing	.29—.30
Szechuen ass't	.26—.27
Cordova	.24—.25
Scotch Black Face	.23—.24
East India: Kandahar	.36—.38
Vican'r	.40—.44
Joria	.45—.50
Aleppo	.37—.39

SUBSTITUTES

Wool Waste

Lap—	
Fine white	1.12—1.15
Fine colored	.78— .80
Thread White Worsted—	
Fine	.75— .80
½ blood	.70— .73
⅜ blood	.65— .68
¼ blood	.50— .55
Thread Colored Worsted—	
Fine	.33— .35
½ blood	.30— .33
⅜ blood	.28— .30
¼ blood	.25— .28
Card—	
Fine white	.43— .45
Medium white	.30— .33

Old Woolen Rags

Merinos—	
Coarse light	7 — 7½
Fine light	16 —17
Fine dark	5 — 5½
Serges—	
Blue	7 — 7½
Black	5 — 6
Red	14 —14½
Knit—	
White	38 —39
Red	14½— 15
Light hoods	17½—18½
Worsteds—	
Light	7½— 8
Blue	7½— 8
Black	6½— 7

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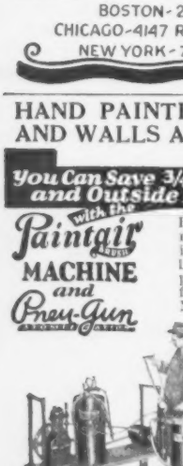

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Cost of paint by hand brush, $1.80. Cost of paint by spraying unit, $2. Net saving effected by spraying unit, $2.63.

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A close-coupled, single stage unit, with capacities ranging from 10 to 150 gallons per minute against heads up to 350 feet, or 150 lbs. pressure. Quality of same high-grade material and workmanship which characterizes all LECOURTENAY pumps.

Occupies minimum of floor space—requiring no sub-base or foundation other than suitable support for its weight. Runs quietly without vibration. Send for Bulletin H-11—and other information regarding the complete LECOURTENAY line.

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Wool—Continued

this year and much of it can be sold direct to the mills without grading or re-packing proving an excellent substitute for fine Australians as the choicer Texas wool grades up to 70s. Choice clips are held on the street for $1.10-1.12 and 8 months wool though in less demand is on an 85-90c basis.

Business in carpet wools is rather slow and the complaint on the part of consumers is very general that prices are too high. The mills generally are busy and are shopping around for low-priced materials including noils. There are several lots of Argentine 6s in bond Boston and also some of this low-grade wool afloat to the United States.

In the English wool markets the outlook for wool values is receiving a great deal of attention. Looked at from the standpoint of the Bradford topmaker there is no development in sight likely to create a buying movement of any importance, but the season's clips have been taken off the market in such a manner that there can be only comparatively small quantities of wools available for the fourth and fifth series of London auctions. There is therefore nothing to suggest the possibility of any substantial decline in raw material values. Bradford district manufacturers are feeling more keenly than any other section the competition from cotton and artificial silk goods as well as the lower prices quoted by Continental manufacturers for competing cloths.

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended May 28, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows, in lbs.:

	Week Ended May 28	1927	1926
Domestic	4,768,000	44,922,000	41,700,000
Foreign	1,280,000	76,858,000	122,329,000
Total	6,048,000	121,780,000	164,029,000
IMPORTS AT PRINCIPAL PORTS			
Boston	1,280,000	76,858,000	122,329,000
Philadelphia	896,000	32,074,000	19,929,000
New York	449,000	27,710,000	29,339,000
Total	2,625,000	136,642,000	171,597,000

New Lambs Arriving

First Sales of B Lambs Reported—Market Firmer and More Active

PHILADELPHIA.— There is a better feeling and prices have strengthened slightly both here and in the west. Fleece dealers endeavoring to buy new wools in the middle West report a two cent advance in a number of sections, owners there now asking 34c for wools they were offering at 32c two weeks ago. Evidence of improvement in the way of actual sales is difficult to find, better feeling in the market being due to strength in the country and restored confidence among local dealers. A similar situation is found in pulled and scoured wools and noils. Pulled wools of best quality are in good demand and slightly higher prices are being paid. Noils are a cent higher than last week.

Although there are reports of sales of bright quarter blood fleece at 38c this week, dealers handling these wools assert they have refused offers at this level and are holding for at least a cent more. Several quote bright quarters at 40c stating they would shade this a cent, making the market level on wools of Missouri quality 39c. Growers in the middle West are holding firmly at 34c, having advanced their ideas this week, price being equivalent to 39c in the Philadelphia market. New fleece wools are arriving here and knitting yarn spinners have been displaying more interest than heretofore. Territory quarter blood staple has been sold this week at 37½c in grease, shrinking 48%.

Lambs Cause Interest

B lambs are being quoted for the first time this season and chief interest has been in a rumored sale of new lambs at 83c, a figure considerably higher than the most optimistic have been predicting. This sale is not, however, regarded as a market price criterion, as other dealers state they will be offering new lambs in a short time at about 80c. Yet there are pullers in this section who assert they will refuse to sell at such a figure and at least one of them has stated the 83c price is not out of the way, this being practically the same as manufacturers are now paying for white B supers.

White B Supers Active

White B and C supers are in good demand and as supplies in dealers' hands are small, prices of best sorts are strong and inclined to go higher. Best Bs are bringing 87c and white Bs 85c, there being no interest displayed in off-sorts. Manufacturers want white wools. In this connection dealers report a fair to good interest in Indias, Vicaneers and Jorias in whites being taken by goods manufacturers. While white supers are well cleaned up there are fair sized stocks of other pulled wools in dealers' hands. The situation as a whole is improved during the last two weeks and prices slightly higher in popular wools.

Noils are more active and approximately a cent higher, dealers quoting quarter blood at 53c to 55c, for 50s grade, 57c to 60c for three-eighths, 65c to 67c for half blood and from 72c to 74c for fine, no sales of the latter grade being reported above 72c this week. Carpet wools are steady and quiet. Interest in decision of U. S. Court of Custom Appeal that refused the Government a rehearing in the Bigelow-Hartford case concerning BA 6s has been apparent in the carpet wool trade this week.

Blackstone Valley Mills Outing

The annual outing of the Blackstone Valley Mills Association will be held July 9 at the Warwick Club on the Providence river.

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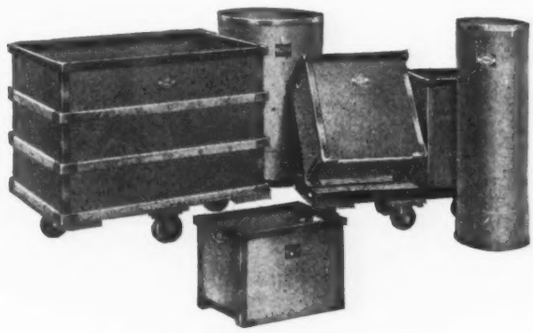

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show not only an immediate return, but also the superior appearance and soft texture their use imparts to textile fabrics greatly assists to build future business for the textile manufacturer who employs them.

This is the experience of hundreds of mill owners and superintendents who have for many years standardized these special purpose alkalies.

Ask your supply man or write

The J. B. FORD CO., *Sole Manufacturers,* Wyandotte, Mich.

DYESTUFFS AND CHEMICALS

New Direct and Mordant Acid Dyes

An addition to their group of direct yellows, National Erie Yellow S2G Conc., has just been announced by the National Aniline & Chemical Co., Inc. This dye has practically no affinity for animal fibers, which are left quite unstained. Where silk-white effects are desired, this dye is especially recommended. It possesses good solubility, dyes level, and exhausts well. In shade it is slightly greener and brighter than National Erie Yellow F.

Nationl Alizarol Brown EB is a new addition to the wool dyes of this company. It is pointed out, in a bulletin recently issued by the concern, that this color is especially valuable on account of its desirable dyeing properties by the ortho-chrome process. It is suitable for the production of browns, tans, olives, etc., either as a self color or in combination with other dyes of the same group. It has good solubility, exhausts well, dyes level, and has good properties of fastness to light, water, fulling, etc.

New England Chemists to Meet

The annual summer outing of the Northern New England Section of the American Association of Textile Chemists and Colorists is planned for Friday, June 10, at the North Shore Golf and Tennis Club, Salem, Mass. Notices have been sent to all members and a good attendance is expected. John H. Grady is chairman of the outing committee, which has planned an interesting program for the day.

Wrong Address Given

Among the descriptions of exhibits at the recent Knitting Arts Exhibition at Philadelphia was one of the display by the Unger Chemical Co. The headquarters of this company was given as East Greenwich, Pa., whereas the address should have been East Greenville, Pa. We are glad to make the correction.

Quartermaster Experimenting on Khaki Dyes

WASHINGTON, D. C.—The Quartermaster General's Office of the Army is now making experiments aimed at making presentable the large number of cotton uniforms which the Army has on hand from war stocks and which, the War Department announces, must be utilized as a matter of economy.

The experiments are for the purpose of developing a method of decolorizing these uniforms, which now appear in a variety of shades all passing for khaki, and then redyeing them to a uniform and proper color. The experiments are being made at Army posts throughout the United States and in the Philippines, Hawaii and Porto Rico.

Practical field tests now are being made of new cotton uniform cloths which are claimed to be of fast color. A company of infantry at Fort Benning, Ga., has been equipped with uniforms made of this cloth which will be worn during the summer months and given wear under service conditions. A company of infantry in Panama is to be similarly equipped.

German Dye Dividends

The I. G. Proposes a 10% Return on 1926 Operations

WASHINGTON, D. C.—The German dye trust will propose a 10% dividend on its 1926 operations at the general meeting to be held June 2, Trade Commissioner W. T. Daugherty, at Berlin, reports to the Department of Commerce. The I. G. paid a 10% dividend last year and 8% in 1924. According to the company's annual report its net profits last year totaled 68,718,000 gold marks, without balance carried forward, and 70,524,000 marks including the latter item. The comparative figures in 1925 were 67,598,000 and 68,044,000 marks. In 1924 there was a net profit of 54,690,000 without balance carried forward.

Gross profits increased from 168,565,000 marks in 1925 to 186,075,000 in 1926. General operating costs declined from 45,197,000 marks to 42,119,000 indicating the progress of the fusion into a "supertrust" approved by stockholders on November 28, 1925, when the then six leading members of the German Dye Trust pooled their resources into one company, began to reallocate production, and to reduce overhead by better economy operation and distribution. Amortizations are written up at 75,237,000 marks against 55,770,000 in 1925.

Despite increasing competition on the world's markets, sales of dyestuffs by the company improved at home and abroad, particularly, as a result of the consolidation of plural foreign sales agencies but also reflecting the more favorable economic situation according to the annual report which states further that so far as can be gauged at present, the improvement will continue during 1927.

By merging Koeln-Rottweil, the I. G. extended its production of artificial silk. Even better results are promised from this concentration of activities under one direction and the allocation of output to plants best specialized to operate economically, the

Miscellaneous Chemicals

Aluminum Sulp. com.	1 40 — 1 45
Iron Free	2 00 — 2 05
Alum, Ammonia Lmp.	3¾ — 3½
Potash, Lump	2¾ — 3¼
Ammoniac, Sal. white gr., dom.	5½ — 7
Bleach powder, per 100 lb. works	2 00 — 2 40
Blue Stone	5 — 5¼
Calcium Arsenate	7½ — 8
Chlorine, Liq. Cylinders	5½ — 9
Tanks	4 — ...
Copperas, ton	13 00 —19 00
Cream of Tartar	22½ — 23
Epsom Salts, 100 lb.	1 25 — 1 90
Formaldehyde Spot	11½ — 12
Glauber Salts, 100 lb.	90 — 1 15
Glycerine (C. P.) bbls.	26 — 26½
Cans	27½ — 28
Yellow Crude	26 — 26½
Hydrosulphite Conc.	24 — 25
Lead—Brown acetate	13 — 13½
White (crystals)	14 — 14½
Lime, acetate, 100 lb.	3 50 — ...
Potassium—Bichromate	8¼ — 8⅝
Chlorate crystals	8½ — 9
Permangan, tech.	13½ — 14
Sodium acetate	4½ — 5
Bichromate	6½ — 6¾
Bisulphite, 35%	1 50 — 1 75
Nitrite	8 — 9
Phosphate	3¾ — 4¼
Prussiate, yellow	12 — 12½
Sulphide, 60% fused, 30% crystals	3¾ — 4 2¼ — 2½
Tartar emetic, tech.	29 — 31½
Tin—Crystals	46½ — 47
Bichloride, 50 deg.	19½ — 19¾
Oxide, bbls.	70 — 72
Zinc Dust	9½ — 10

Acids

Acetic, 28% per 100 lb.	3 37½ — 3 62½
Citric crystals	43½ — 44½
Formic, 90%	10½ — 11
Lactic, 22%	5½ — 7
Muriatic, 18 deg. per 100 lb. in tank cars	85 — 95
Nitric, 36@42 deg. per 100 lb.	5 00 — 6 75
Oxalic	11¼ — 12
Sulphuric, 66 deg. per ton in tank cars	15 00 —16 00
Tartaric (imported)	27½ — 28

Alkalies

Ammonia, aqua, 26 deg.	2¾ — 3¼
Borax, Crys. bbls.	4½ — ...
Potash, carbonate, 80–85%	5½ — 6
Caustic, 88–92%	7¼ — 7⅝
Soda Ash, 58% light	1 37½ — 2 44
Contract, 100 lb.	1 32½ — 1 57½
Bicarb, per 100 lbs.	1 90 — 2 25
Caustic, 76% per 100 lb.	3 10 — 3 90
Contract, 100 lb	3 00
Sal. 100 lb.	90 — 1 00

Natural Dyes and Tannins

Fustic: Crystals	18 — 22
Liquid, 51 deg.	9 — 10
Gambier, liquid	11½ — 12
Hematine, crystals	14 — 18
Hypernic Ext.—51 deg.	11 — 15
Indigo—Madras	1 30 — ...
Logwood Extract, liq. 51 deg.	8 — 9
Crystals	14 — 18
Osage Orange, Extract, 51 deg.	7 — 7¼
Quercitron extract, 51 deg.	6 — 6½
Sumac, Ext. dom., ref., 51 deg.	6½ — 7
Extract, stainless	10 — ...
Tannic Acid, tech.	35 — 40

Dyestuffs and Intermediaries

Alpha Napthylamine	35 — 37
Crude	60 — 65
Aniline Oil	15 — 15½
Salt	24 — 25
Beta Naphthol, sublimed	55 — 60
Technical	22 — 24
Dimethylaniline	32 — 34
Metaphenylene Diamine	90 — 95
Paranitraniline	52 — 53

Oils and Soaps

Caster Oil, No. 3	13½ — 15
Olive Oil, denatured, gal.	1 65 — 1 75
Foots	9½ — ...
Red Oil, lb.	9 — 10½
Stearic Acid, double pressed	11½ — 12
Turkey Red Oil, 50%	10 — 12
Tapioca flour	3½ — 5½

Adhesive and Sizing Materials

Albumen, blood domestic	45 — 60
Dextrine-Potato	8½ — 9
Corn, bags 100 lb.	4 07 — 4 12
Do. bbls., 100 lb.	4 34 — 4 39
Gum, British, 100 lb.	4 37 — ...
Do. bbls.	4 64 — ...
Sago flour	3½ — 4
Starch, corn, 100 lb.	3 32 — 3 42
Do. bbls.	3 59 — 3 69
Do. thin boiling, bags, 100 lb.	3 92 — 4 02
Do. bbls.	4 19 — 4 29
Potato	6½ — 7½
Rice	9 — 9½
Wheat	6½ — 8

Coal Tar Dyes

Direct Colors—	
Black (H-acid)	28 — 35
Black Columbia FF.	50 — 60
Blue, 2 B.	24 — 32
Blue sky, ordinary	60 — 80
Blue, 2 GL.	2 00 — 2 50
Blue, 4 GL.	2 25 — ...
Blue Sky, FF.	95 — 1 50
Blue, Fast RL.	1 90 — ...
Blue, Solamine	2 00 — ...
Benzo Azurine	75 — 80
Brown, C.	50 — 60
Brown, M.	70 — 90
Brown, Congo G.	85 — ...
Brown, Congo R.	80 — ...
Green, B.	60 — 90
Green, G.	65 — 90
Orange, Congo	60 — ...
Orange, Fast S.	1 70 — ...
Red, Fast F.	80 — 90
Red, Congo	40 — 50
Benzo Purpurine, 4 B.	40 — 60
Benzo Purpurine 10 B.	1 25 — 1 50
Scarlet, 4 BA.	1 50 — ...
Scarlet, 4 BS.	2 10 — ...
Scarlet, 8 BS.	2 15 — ...
Scarlet, Diamine B.	1 65 — ...
Violet N.	1 10 — 1 20
Yellow chrysophenine	60 — 1 30
Yellow, Stillbene	90 — 95
Developing Colors—	
Black, BH	40 — 60
Black Zambesi	... — 90
Bordeaux, Dev.	2 50 — ...
Orange, developed	2 50 — ...
Primuline	1 00 — 1 15
Red, Dev. 7 BL.	2 50 — ..
Scarlet, Dev.	2 50 — ...
Sulphur Colors—	
Black	14 — 24
Blue, cadet	90 — 95
Blue, navy	50 — 60
Brown	20 — 60
Green	55 — 1 50
Green, olive	25 — 50
Yellow	45 — 50
Basic Colors—	
Auramine	90 — 1 00
Bismark Brown	50 — 60
Chrysoidine	40 — 65
Fuschine crystals	1 50 — 1 75
Malachite green	1 50 — ...
Methylene blue	1 10 — 1 25
Methyl violet	80 — 1 15
Rhodamine B. extcone	5 50 — 6 00
Safranine	1 45 — 1 60
Victoria Blue B.	3 10 — ...
Acid Colors—	
Naphthol blue blk.	35 — 60
Napthlamine black 4 B.	50 — 55
Alizarine saphirol	2 75 — 4 00
Alkali blue	3 25 — 3 50
Indigotine	75 — 1 30
Induline (water soluable)	75 — 80
Soluble Blue	3 00 — 3 75
Sulphoneyanine	70 — 95
Sulphone Blue R.	60 — 95
Patent Blue A.	2 85 — ...
Rescorcin brown	80 — 90
Guinea green	1 00 — 2 20
Wool green S.	70 — 1 70
Orange II	24 — 30
Orange GG crys.	60 — ...
Acid Fuchsine	80 — 90
Azo eosine G.	65 — 82
Crocein scarlet	1 15 — 1 30
Fast red A.	50 — 65
Azo yellow	1 35 — 1 40
F. Light Yellow 2 G.	2 00 — ...
F. Light Yellow 3 G.	1 00 — 2 50
Naphthol, yellow	1 35 — 1 40
Chrome Colors—	
Aliz. Black B.	2 00 — ...
Diamond Black PV.	70 — ...
Chrome Blue Black	40 — 50
Chrome Brown	60 — 1 25
Chrome Green	75 — 1 50
Chrome Yellow	45 — 1 10
Indigo—	
Synthetic 20% paste.	14 — 14½

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Dyes and Chemicals—Continued

report says. The year's production was completely sold out. Prices, however, have not yet been reduced.

Chemical Changes in Wool

(*Continued from page 84*)

support to the view that a leuco-compound is formed.

Four very concordant experiments gave an average of .023 gm. of sulphuric acid when the weight of the wool, containing 13% of water, was 50 gms., or .053 gm. of sulphuric acid per 100 gms. of "dry" wool. Further experiments showed, however, that it is very doubtful whether even the small quantity of sulphuric acid which was found in the experiments just described had any connection whatever with the bleaching of some colored substance, because, if this acid had been produced as the result of the formation of some leuco-compound, a repetition of the experiment with the same wool, should show much less acid or none at all.

A second treatment was therefore carried out as before. The quantity of sulphuric acid obtained in this second treatment was practically the same as in the first, and in fact the same wool, treated ten times with sulphur dioxide in the total absence of oxygen, gave each time approximately the same amount of sulphuric acid as in the first experiment. An obvious explanation of these results would be, of course, that oxygen gained admission during the experiment owing to defective apparatus or that the sulphuric acid was contained in the reagents which were used. Several blank experiments were therefore carried out, using a little concentrated solution of sodium carbonate in the place of the wool, all other conditions remaining unchanged. Not a trace of sulphuric acid was produced.

No satisfactory explanation of this formation of sulphuric acid can be advanced, but the conclusion seems to be justifiable that the bleaching of wool with sulphur dioxide does not involve the addition of hydrogen to a colored substance. This conclusion is confirmed by the fact that when unbleached wool is well padded with finely divided magnesium and then placed in dilute acid until all the magnesium has dissolved, no bleaching effect whatever is observed. Wool left during 24 hours at ordinary temperatures in a solution of formalin appears to be bleached to a slight extent, but under all conditions which were tried the action of formalin is far less than that of sulphur dioxide. *Abstracted from article in the "Journal of the Textile Institute."*

Soap Manufacturers to Build Plant in Canada

Scholler Bros., Inc., soap manufacturers of Philadelphia, Pa., have purchased a desirable site in St. Catharines, Ontario on which a branch plant will be erected to supply customers in the Canadian industry.

Business News

Appleton Electric Co. Buys Complete Foundry

The Appleton Electric Co., 1701 Wellington Avenue, Chicago, manufacturer of "Unilets" and other conduit fittings, announces the purchase on Jan. 1 of the complete foundry equipment, buildings and land of the Stowell Co., South Milwaukee, Wis., and is now operating it as plant No. 2 under the name of the Wisconsin Appleton Company.

New Financial Firm at Greenville

R. S. Dickson & Co., dealers in stocks and bonds, will close the branch office in Greenville, S. C., on June 1, and J. F. McAllister, manager, will head a similar firm under his own name. R. S. Dickson & Co. will operate through this section from its offices in Gastonia, N. C. The location of the new firm has not been definitely decided, but will likely be in the Woodside Building.

Link-Belt Erecting New Plant at Toronto

The Link-Belt Co., Toronto, has awarded the contract for the first unit of the building program on the five acre site recently purchased at the corner of Eastern Ave., and Leslie St., Toronto, Canada. The unit now in course of construction will consist of a two-story building, 80x160 feet, of pressed brick, the walls will be trimmed with Queenston limestone.

Dixon Crucible Co. Reaches Century Mark

The century mark is always a thrilling milestone in the history of a business organization. It is particularly interesting in the case of the Joseph Dixon Crucible Co., Jersey City, N. J., in view of the developments which have featured the lifetime of that company.

As a momento of the occasion, the Joseph Dixon Crucible Co. has had prepared by Floyd W. Parsons the story of its career, published in brochure form under the title "A Tale of Yesterday, Today and Tomorrow."

In 1827, Joseph Dixon started a business in Salem, Mass., to manufacture articles from graphite. From that time until the present day the company's growth and development have centered around this same raw material, graphite, which many call "black lead." In fact practically the only products of the entire Dixon line that do not contain graphite are rubber erasers, a solid belt dressing, and some of the crayons. It was a perfectly logical outcome for the business to grow to be not only a leading producer of graphite crucibles, but one of the world's largest manufacturers of pencils and of graphite lubricants and protective paints.

The death of Joseph Dixon in 1869 deprived the company of the living personality of its founder. But subsequent developments proved that he built wisely in creating a policy that entails the selection of executives for high positions from those who have grown up in the company.

The second epoch in the history of the

All Around

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Pyrofax is used also for cooking in hospitals, schools and private homes

company was under the leadership of E. F. C. Young as president and John A. Walker as vice-president and treasurer. Mr. Walker passed away in 1907, and upon the death of Mr. Young in 1908 a new man took his place at the president's desk in the Dixon offices. George T. Smith, who succeeded to the presidency is still active in that office.

"The Joseph Dixon Crucible Co.," states Mr. Parsons, "starts is second century free of moss and stripped for action. The company's personnel is made up of men to whom graphite has become an instinct as well as a material. Before a decade has passed, many things here predicted with hesitation will have become realized facts. If the changes that take place include radical departures which improve pencils, or crucibles, or any of the things that graphite goes into, the Dixon chemists and engineers will see that the label on the new and better products bears the name of their company. When the changing times develop a clear understanding in the public's mind that individual success is heightened by catching every bright idea before it slips away, notebook and pencil usage will increase ten-fold, and the new pencil-consciousness prevailing, will make quality the governing factor in sales. These are the things that Dixon knows and for which the management is already planning."

Making Long Distance Telephone Selling More Economical

The "key town" telephone sales plan is the name of a new idea which will assist sales representatives of business houses to use long distance service more economically and conveniently for a quick and intensive coverage of sales territories.

As the name implies, certain strategically important market centers in every state adaptable to the widest range of telephone selling activity, become key towns. From these towns telephone solicitation of customers located in the surrounding area is more economical on the basis of average cost of calls, than from any other calling point.

One aspect of the plan which will be of interest to executives is an arrangement whereby credit may be extended to sales representatives of firms adoptting the plan in their sales programs. This convenience will eliminate the necessity of requesting the representatives to obtain vouchers of their long distance charges for checking purposes, as well as for their carrying sums of cash for telephone expense. The methodical manner in which calls are handled by the new plan will conserve the salesmen's time.

Established firms adopting the plan will receive identification cards for their traveling representatives, which will be issued by the Bell Company operating in the territory in which the headquarters of the firms are located. These cards will be honored at the telephone business offices throughout the Bell System upon presentation and proper identification.

Because salesmen usually find it necessary to put through a number of toll calls at certain intervals, sequence toll service is highly suitable for work of this kind. A special multi-copy sequence toll call form has been designed especially for use in connection with the credit plan.

Upon completion of other disposition of the toll calls the salesman approves the checking copy to indicate that the service as represented has been received. Then the bill is rendered, with the checking copy attached, to his firm's headquarters by the telephone office at which the salesman made the calls.

Business Literature

PORCELAIN; Mitchell-Bissell Co., Trenton, N. J.

In the handsomely bound, 108-page, book issued under the title "Porcelain" by the Mitchell-Bissell Co., are illustrated the great variety of porcelain, glass and enameled iron guides made by this concern for the textile industry. These items take the form of hooks, pig tails, buttons, runners, rings, eyes, tubes, dents, steps, pulleys, etc., and there are styles specially designed for cotton, woolen, worsted and silk machinery as well as for knitting machines. The company carries in stock or will make up 3000 to 4000 different shapes, ranging in size from ⅛ to 8 inches in diameter.

This new catalog has just come off the press. In its frontispiece it illustrates the Mitchell-Bissell Co.'s plant at Brunswick and Heil Aves., Trenton, N. J. There is also a brief historical sketch of the company and its contribution to the textile industry. It is pointed out that before Henry R. Mitchell, founder of the company, produced the first guides made of porcelain, 50 years ago, there had been no guides which would long withstand the cutting action of running thread. They also stress the exceptional hardness of their product, its accuracy as to size and the thorough inspection of the output.

The catalog's many pages of illustrations are carefully indexed for quick reference and there is an index by pattern numbers, giving the page upon which that item is illustrated. The volume provides an excellent reference for those using these guides. It is durably bound to withstand hard usage.

BULLETIN No. 501, Appleton Electric Co., Chicago, Ill.:

Appleton Electric Co., Chicago, Ill., manufacturers of Unilets and other conduit fittings and also a complete line of Reelites, which are automatic spring driven reels for electric cable, announces a new Bulletin 501 listing the complete line of the Constant Duty Reelites used in connection with portable machinery; also monorail hoists, lifting magnets, etc., and which also contains a listing of the small types of Reelites used extensively in various industries.

HAND STARTING COMPENSATORS; General Electric Co., Schenectady, N. Y.

This bulletin (GEA-140) is concerned with hand starting compensators for squirrel-cage induction motors. Illustrations show details of construction of type CR1034-K1 compensators alone, with a disconnecting switch, and with an ammeter attachment.

AUTOMATIC STARTING COMPENSATORS; General Electric Co., Schenectady, N. Y.

Bulletin GEA-416A shows automatic starting compensators for squirrel-cage induction motors. Descriptions of the compensator, a motor circuit switch, and an ammeter attachment, as well as wiring diagrams are given.

DRUM-TYPE CONTROL EQUIPMENT; General Electric Co., Schenectady, N. Y.

In this folder (GEA-250) drum-type control equipment for two or three-phase wound-rotor induction motors is described. The standard line of CR3204 drum switches and type IG resistor are illustrated, and the distinctive features of each are pointed out.

Army and Marine Corps Open Bids

PHILADELPHIA.—Depot Quartermaster, U. S. Marine Corps, is not ready to announce award of contract to furnish them with 200,000 yds. of khaki suiting on which bids were recently opened. Officials of the depot state they wish to make a further study of bids received before making any award. The following bids were received on this suiting: Batavia Mills, Inc., New York, 31.39c per yd.; Sunbrook Mills, Boston, 31.94c; Amory, Browne & Co., 29.95c; Penn Supply Co., Philadelphia, 37.5c; Parker Wilder & Co., New York, 26.98c on each of three samples.

Proposals for supplying this depot with 50,000 yds., indigo blue denim were opened May 31, the following bids being received: Batavia Mills, Inc., 14.69c per yd., according to specifications; Penn Supply Co., Philadelphia, 15.45c, 15.1c and 14.8c on three samples submitted; Moe Rosenberg, New York, 15.74c with delivery in 60 to 90 days; King Kard Overall Co., Philadelphia, 14.9c, 15.85c and 16.33c on three samples, net, spot delivery; Samoset Cotton Mills, Boston, 16.7c, net; Ellis A. Gimbel, Philadelphia, 17.24c, net. Officials of the depot state they have recommended that this contract be placed with Batavia Mills, Inc., at 14.69c per yd.

Sheeting Bids

Bids were opened at the local depot of the U. S. Army Quartermaster Corps, 21st and Oregon Ave., to furnish them with 38,335 yds. of unbleached sheeting 42 in. wide. Lowest bid received was that of S. B. Marks & Co., 14.44c per yd., terms 2% 10 days. Other bids opened were: Moe Rosenberg, New York, 14.96c, net, with delivery of 2,000 yds. prior to June 30; Ellis A. Gimbel, Philadelphia, 17⅞c, net, with delivery in 70 days; Batavia Mills, Inc., New York, 15.89c, terms 1% 10 days; Marshall Field & Co., Chicago, 15⅜c, net.

Staple Cottons Slow

(*Continued from page* 129)

have been reported during the week have been put through at unchanged prices, although the amount of cotton available at our minimum quotations is comparatively small.

New Crop Uppers Firmer

Failure of the Alexandria market to follow yesterday's advance in American futures seems to indicate that the speculative boom is exhausted temporarily, particularly on the Sak. options; Uppers are relatively firm and the October option which closed today at $25.00 shows a net advance for the week of 23 points, as compared with a decline of 13 points in June Uppers. This seems to indicate a saner evaluation of the probable effect of the Mississippi flood upon the extra staple cotton market, for it is the better grades of Uppers rather than of Sak. that ought to be benefited most by any scarcity of domestic staples. However, it is the Sak. options that always reflect speculative sentiment in the Alexandria market irrespective of whether the cause of speculative buying is to benefit Sak. cotton.

Current Quotations

Average prices for June–July shipment of middling and strict middling hard western cotton (Government lengths) are as follows:

	Middling	St. Middling
1 1/16 in.	20 to20½c.	21 to21½c.
1 1/16 in. to ⅛ in.	20½to21c.	21½to22c.
1 ⅛ in.	21½to22½c.	22 to23c.
1 3/16 in.	25 to26c.	26 to27c.
1 ¼ in.	30 to31c.	32 to34c.

Basis on N. Y. July, 16.71c.

John Malloch & Co., Boston, quote Egyptian cotton, c. i. f. Boston for June-July shipment as follows: Medium Sakellarides 32⅜c, off ½c. Medium Uppers, 25¾c, off ⅜c, from May 25. They report closing prices June 1 on the Alexandria exchange as follows: June Uppers $23.57, off 13c. July Sak. $32.28, off 32c from May 25.

New Publications

Books reviewed in this column may be obtained from the Braddon, Lord & Nagle Co., 334 Fourth Ave., New York City.

GERMAN TEXTILE DIRECTORY ("ADRESSBUCH DER GESAMTEN TEXTIL-INDUSTRIE DEUTSCHLANDS".); Schulze & Co., Leipzig; 1468 pages, 6 x 9; printed in German:

This directory includes the names and addresses, of German textile manufacturers as well as commission houses, selling agents, importers and exporters handling textile goods.

The directory is arranged in six parts covering different branches of the textile industry. It contains the names and addresses of 9336 manufacturers including spinners and weavers, and the names of over 21,000 firms appear under 500 classifications. All of the lists are arranged geographically and give more or less detail as to the equipment and products of the manufacturers.

HOW TO WEAVE LINENS, by Edward F. Worst. The Bruce Publishing Co., Milwaukee, Wis. $3.50, 166 pages.

Mr. Worst is a director of textiles in the senior high schools of Chicago, Ill., and has already published a treatise on hand-loom weaving. In the present book he not only takes up the subject of weaving linens on the hand loom, but also the various handicraft processes in raising and preparing the flax and in skeining and warping the yarn. A brief chapter is devoted to sizing the warp, washing and bleaching the fabric, and distinguishing between linen and cotton by certain tests. The section devoted to raising flax, rippling, retting, breaking, scutching, hackling, and warp preparing is well illustrated, affording an almost complete picture story of these processes.

The book is written primarily for the amateur weaver. He is first told how to tie up his harnesses; and then, throughout the greater number of pages, he is presented with various drafts for drawing in the warps, tying up the harnesses, and pressing the treadles in weaving certain fabrics, all of which are illustrated by photographs. Altogether there are 80 or more of these drafts, including nine or ten which have been found in the old cabins of the Kentucky hill country. The drafts range from those for simple patterns requiring two harnesses to those for more elaborate patterns requiring ten harnesses.

Financial—Continued

(*Continued from page* 117)

Mills sold the entire preferred stock issue in this corporation only a few months ago for less than half its par value and now there is a market and sales on the common stock of 90 per cent of its par value. As the largest owner of Pemaquid common stock, Mr. Harding would seem to be in a position to be rewarded for the sacrifices he was prepared to make for the good of all."

New England Textile Stocks

(Quotations at "Public Sale" are based upon last sales at Boston public auction and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.)

	Public Sale	Bid	Asked
Am. Wool pfd.	47	...	...
Am. Mfg., pfd.....	82	81	84
Amoskeag, com.	61	...	...
Androscoggin	45	45	48
Arlington	67	66	68
Bates	133¼	131	135
Berkshire Cot.	...	134	138
Bigelow-Htfd, com...	84	...	...
Boott	...	105	...
Edwards	41	45	...
Esmond, pfd	100¾	98½	...
Everett	7½	7	9
Farr Alpaca	158½	158	162
Great Falls	14¾	15	18
Hamilton Woolen....	28	29	32
Hill	24½	24	26
Ipswich, pfd.	90	...	72
Ipswich, com.....	48	...	40
Lawrence	67⅞	69	72
Ludlow Asso.	186⅝	185	190
Lyman	159	150	155
Massachusetts	71	65	70
Merrimack, com.....	120½	124	127
Nashua, com.	46¾	47	50
Nashua, pfd.	95½	93	96
Naumkeag	194	193	196
N. E. So. pfd.....	3½	...	...
Otis Co.	44	42	45
Pacific	39½	...	...
Pepperell	119⅝	119	121
Plymouth Cordage...	110	108	110
Tremont & Suffolk..	23¼	19	23
York	26¼	25	28

New Bedford Quotations

(Quotations furnished by Sanford & Kelly)

	Bid	Asked
Acushnet Mills	92	...
Beacon Mfg. com.....	125	...
Beacon Mfg., pfd.....	94½	96
Booth Mfg. Co., com.....	...	100
Booth Mfg. Co., pfd.....	86	...
Bristol Mfg. Co.....	119	...
Butler Mfg. Co.....	56	59
City Mfg. Co.....	90	...
Dartmouth Mfg. Co., com...	105	...
Dartmouth Mfg. Co., pfd...	82½	...
Fairhaven Mills, pfd.....	4½	...
Gosnold Mills, com.....	16	18
Gosnold Mills, pfd.....	39	42
Grinnell Mfg. Co.....	78	...
Hathaway Mfg. Co.....	104	108
Holmes Mfg. Co., com.....	...	55
Holmes Mfg. Co., pfd.....	54	...
Kilburn Mill	85	...
Manomet Mills	5½	6½
Nashawena Mill	83½	84½
N. B. Cotton Mills, com....	100	...
N. B. Cotton Mills, pfd....	85	87
Neild Mill	165	...
Nonquitt Spn. Co.....	34	35
Pemaquid Mills	18½	...
Pierce Mill	372½	...
Potomska Mills	82	85
Quissett Mills Co., com.....	...	95
Quissett Mills Co., pfd.....	92½	...
Sharp Mfg. Co., com.....	9¼	10½
Sharp Mfg. Co., pfd.....	26	30
Soule Mill	166	...
Taber Mill	91	...
Wamsutta Mills	67	68
Whitman Mills	50	53

* Ex-dividend.

Fall River Mills Stocks

(Quotations furnished by G. M. Haffords & Co.)

	Bid	Asked
American Linen Co.....	...	15
Arkwright Mills	15	...
Barnard Mfg. Co.....	32	...
Borden Mfg. Co., Richard..	35	...
Border City Mfg. Co.....	35	...
Bourne Mills Co.....	...	75
Chace Mills	...	...
Charlton Mills	...	114
Cornell Mills	65	...
Davis Mills	...	68
Davol Mills	24	...
Flint Mills	92	...
Granite Mills	...	•25
King Philip Mills.....	143	150
Laurel Lake Mills (com.)..	12	16
Laurel Lake Mills (pfd.)..	...	...
Lincoln Mfg. Co.....	48	...
Luther Mfg. Co.....	...	114
Mechanics Mills	...	...
Merchants Mfg. Co.....	...	55
Narragansett Mills	...	50
Osborn Mills	...	25
Parker Mills (com.).....	...	...
Pilgrim Mills (com.).....	132	...
Pocasset Mfg. Co.....	...	...
Sagamore Mfg. Co.....	145	...
Seaconnet Mills	...	...
Shove Mills	...	25
Stafford Mills	...	25
Stevens Mfg. Co.....	...	107
Troy C. & W. Mfg.....	125	...
Union Cotton Mfg. Co.....	83	...
Wamsutta Mills	...	27
Weetamoe Mills	...	20

* Old stock.

N. Carolina Textile Stocks

(Taken from list of Southern Mill Stocks quoted by R. S. Dickson & Co., Gastonia, N. C.

	Bid	Asked
Acme Spinning Co.....	114	117
Am. Yarn & Processing Co.	96	100
Arlington Cotton Mills....	82	90
Arrow Mills	75	90
Cabarrus Cotton Mills.....	142	161
Cabarrus Cotton Mills 7% pfd.	109½	...
Cannon Mfg. Co., (par $10)	18½	...
Chadwick-Hoskins Co. (par $25)	13	15
Chadwick-Hoskins Co., 8% pfd.	101	103
China Grove Cotton Mills..	111	116
Clara Mfg. Co.....	72	...
Climax Spinning Co.....	115	121
Clover Mills	...	71
Crescent Spinning Co.....	99	...
Dixon Mills	99	...
Durham Hosiery 7% pfd...	43	48
Durham Hosiery "B".....	6	10
Eastern Mfg. Co.....	...	58
Erwin Cotton Mills Co....	114	...
Erwin Cotton Mills Co., 6% pfd.	100	103
Gibson Mfg. Co.....	130	141
Globe Yarn Mills (N. C.)..	53	61
Gray Mfg. Co.....	...	82
Hanes, P. H. Knitting Co..	9	11
Hanes, P. H. Ktg. Co., 7% pfd.	101	...
Henrietta 7% pfd.....	70	80
Imperial Yarn Mills.....	95	99
Jennings Cotton Mills.....	219	231
Linford Mills	107	...
Locke Cotton Mills Co.....	115	126
Lola Mfg. Co.....	...	47
Majestic Mfg. Co.....	174	...
Mansfield Mills	118	130
Mooresville Cotton Mills..	37	...
Mooresville Cotton Mills, 7% pfd.	...	85
Myers Mill	75	85
National Yarn Mill.....	100	110
Parkdale Mills	...	77
Perfection Spinning Co.....	100	105
Ranlo Mfg. Co.....	139	145
Rhyne-Houser Mfg. Co....	75	85
Roanoke Mills, 7½% 1st pfd.	97	99
Roanoke Mills, 8% 2nd pfd.	96	100
Rosemary, 7½% pfd.....	98½	...
Rowan Cotton Mills Co....	90	...
Seminole Cotton Mills Co...	80	95
Sterling Spinning Co.....	105	112
Stowe Spinning Co.....	108	112
Victory Yarn Mills Co.....	54	63
Winget Yarn Mills Co.....	...	62
Wiscasset Mills Co.....	200	...

Rayon Stocks on N. Y. Curb

(Week ending May 31)

Stock	Sales	High	Low	Last
Celanese Corp.....	44,500	73½	54¼	73½
Courtaulds	100	29¾	29¾	29¾
Industrial Rayon.....	1,000	7½	6¼	6¼
Snia Viscosa, Repts.....	400	10	10	10
Tubize Art Silk.....	75	238½	233½	238½

Wavark Mills, Philadelphia. This is the name of a concern that has started business at Unity and Leiper Sts., Frankford. They weave various kinds of fabrics, having as an initial equipment 14 looms which will be increased from time to time. They have leased space on the second floor of building occupied by Unity Finishing Co.

Miesch Mfg. Co., Paterson, N. J., who sell their goods through the John C. Welwood Corp., New York, bought from the receivers of the E. F. Bornemann Corp., Paterson, all the looms and accessory machinery; also the goodwill. The Miesch Mfg. Co. will continue all patterns of the Bornemann Corporation for which there is a demand.

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MAGIC

The Arabian Nights told us of two magic words, "Open Sesame" which opened the doors of the hidden cave.

The modern interpretation is found in the following words "wanted" and "for sale." These have "opened the door" for many a mill man who has used the Clearing House pages of Textile World.

These columns are available to you as a means of selling or buying "used but useful" machines and equipment, small lots of supplies, etc.

Advertisements must reach us before 4 p. m. on Wednesday to appear in the issue dated Saturday of that week.

Textile World, 334 Fourth Ave., New York.